

January 28, 2022

U.S. Environmental Protection Agency, Region 9
Drinking Water Protection Section (WTR 4-2)
75 Hawthorne Street
San Francisco, California 94105

Attention: David Albright, Manager, Ground Water Office

Subject: Fourth Quarter 2021 Monitoring Report
Underground Injection Control (UIC) Permit No. R9UIC-AZ3-FY11-1

Dear Mr. Albright:

Florence Copper Inc. (Florence Copper) is regulated under UIC Permit No. R9UIC-AZ3-FY11-1, issued December 20, 2016, for a Production Test Facility (PTF). The facility began active operations on December 15, 2018. The rinsing demonstration for the PTF began on June 26, 2020. This report outlines the reporting requirements in accordance with Part II.G.2 of that Permit.

Background Information

The Florence Copper Project is an in-situ copper extraction facility subject to two related permits issued by the U.S. Environmental Protection Agency (USEPA) and the Arizona Department of Environmental Quality (ADEQ).

Aquifer Protection Permit (APP) Covering the 1997-98 BHP Pilot Facilities and Future Operations (Sitewide APP):

- ADEQ APP No. P-101704 (LTF 88973) dated April 30, 2021.

Prior to the amended permit issued on December 8, 2020, the Florence Copper Project was regulated under APP No. P-101704 (LTF 65804) dated October 13, 2017.

A test wellfield, a small leachate processing facility, and a double-lined evaporation pond were constructed as authorized by APP No. P-101704 in 1997. The Pilot Test Facility operated from October 31, 1997 to February 9, 1998. The test area was rinsed until September 1, 2004. Cessation of hydraulic control for testing was approved by both agencies and the wellfield has since remained inactive. Subsequently, no Sitewide permit related activities took place until the issuance of the amended permit on December 8, 2020. The authorized facilities and monitoring wells are identified on Figure 1. Reporting required by APP No. P-101704 is provided under separate cover; however, some information pertains to multiple permits and is reported accordingly.

Underground Injection Control (UIC) Permit Covering the Current Production Test Facility:

- USEPA UIC Permit No. R9UIC-AZ3-FY11-1 dated December 20, 2016.

This permit authorizes operation of the PTF and sets forth separate monitoring requirements to be applied at the PTF, which lies within the area covered by the APP. The UIC facilities and monitoring wells are identified on Figure 1. The configuration of the PTF wellfield is shown on Figure 2. The facility received authorization to proceed with pre-operational activities on July 13, 2017, and the PTF wellfield was completed and began operations on December 15, 2018. The rinsing activities for the PTF began on June 26, 2020. Solutions from the wellfield continued to be processed through the Solvent Extraction/Electrowinning (SX/EW) plant to produce copper in Q4 until October 29, 2020. Wellfield rinsing activities will continue in 2022.

This report documents monitoring activities required by the UIC permit during Q4 2021. Reporting for the APP is performed separately; however, some information pertains to multiple permits and is reported accordingly.

PTF Operations Quarterly Reporting

■ Part II.G.2.a – Map of Operational Status and Groundwater Contours

The monthly groundwater contour maps are included as Attachment 1. The operational status of the PTF facility was ACTIVE during Q4 2021.

■ Part II.G.2.b – Table and Graphs of Injected and Recovered Volumes

The daily cumulative injection and recovery volumes and the daily percent recovery to injection volume values are provided in tabular and graphical format in Attachment 2. Throughout Q4 2021, the extracted volume has consistently exceeded the injected volume by 10 percent or more, and the monthly average injection rate remained below the 240-gallon-per-minute limit.

■ Part II.G.2.c – Table and Graphs of the Well Head Measurements in the PTF

The daily average head measurement values for the observation wells and recovery wells are provided in tabular and graphical format in Attachment 3. The hydraulic gradient has been maintained with a greater than 1-foot differential as a daily average for all paired wells throughout Q4 2021.

■ Part II.G.2.d – Table and Graphs of Fluid Electrical Conductivity Measurements

Fluid electrical conductivity (EC) values are provided in tabular and graphical format in Attachment 4. As expected, fluid EC in the injection and observation wells was comparable during the monitoring period. Throughout the monitoring period, the PTF wellfield was being rinsed and no injection of in-situ copper recovery fluids took place.

■ Part II.G.2.e – Table and Graphs of Bulk Electrical Conductivity Measurements

Bulk EC values are provided in tabular and graphical format in Attachment 5. No bulk EC alert level (AL) exceedances occurred during Q4 2021.

■ Part II.G.2.f – Table and Graphs of Monitor Well Water Levels and Analytical Results

The Q4 2021 Compliance Monitoring Report is provided in Attachment 6 and presents the tabular results of groundwater elevations, analytical results, field parameters, and ALs and aquifer quality limits for wells regulated under the UIC permit and APP. The Compliance Monitoring Report also provides a narrative summary of the Q4 2021 monitoring activities, a discussion of exceedances, and graphical presentation of monitoring results for a select set of parameters since the inception of monitoring.

- **Part II.G.2.g – Results of Monthly Lixiviant Organic Analysis**

The analytical results for monthly lixiviant organic analysis are provided in tabular format in Attachment 7. Total monthly organic concentrations were below the maximum allowable average in Q4 2021.

- **Part II.G.2.h – Results of Monitoring Required if Injection Fluid is Modified**

During Q4 2021, rinsing activities continued in the PTF. No modifications were made to the injection fluid composition during this monitoring period. Routine monthly analysis of the raffinate was completed during Q4 2021 and will continue during the rinsing demonstration.

- **Part II.G.2.i – Results of Mechanical Integrity Testing**

Temperature logging of multi-level sampling wells WB-01, WB02, WB-03, and WB-04 and pressure testing of injection wells I-01, I-02, I-03, and I-04 were conducted during Q4 2021 to demonstrate mechanical integrity. A summary of results is provided in Attachment 8. Each of the four injection wells passed mechanical integrity pressure testing, and temperature logs in each of the four multi-level sampling wells showed no anomalies that would indicate there is flow behind the well casings. Reports discussing the results of the Q4 2021 mechanical integrity testing activities have been provided to USEPA under separate cover.

- **Part II.G.2.j – Results of Annular Conductivity Device (ACD) Monitoring**

The results of the Q4 2021 well bore annular EC monitoring are provided in Attachment 9. Annular EC readings have remained approximately constant or increased slightly in 8 of the 11 wells since monitoring began in Q3 2018. Annular EC has decreased in wells O-04 and O-06 during that same time. The results of the monitoring indicate the absence of injected fluid at the ACD locations. No ALs have been exceeded.

- **Part II.G.2.k – Summary of Plugging and Abandonment Activity**

No wells associated with this permit were abandoned during Q4 2021; therefore, no abandonment report is included for this monitoring period. For future quarterly compliance reports, the Well Abandonment Report will be provided in Attachment 10.

- **Part II.G.2.l – Summary of Closure Operations**

The SX/EW plant ceased operation on October 29, 2020. Wellfield rinsing that began in 2020 has continued through Q4 2021. No closure activities were initiated in this monitoring period.

- **Part II.G.2.m – Table of Monthly Casing Annulus and Injection Pressures**

Monthly maximum, minimum, and average injection pressures are provided in Attachment 11. There were no exceedances of the injection pressure limit during Q4 2021.

- **Part II.G.2 – Analytical Results for Monthly Treated Water Samples**

Monthly analytical results for samples of the treated water are provided in Attachment 12.

- **Appendix H – Migratory Bird Landings and Mortality**

Daily inspection of the Process Solution Impoundment was conducted to record any migratory bird landings and/or identify any migratory bird mortality. As summarized in Attachment 13, no bird landings were observed during Q4 2021.

Please call (520) 316-3710 with any questions regarding the content of this document.

Sincerely,
Florence Copper Inc.

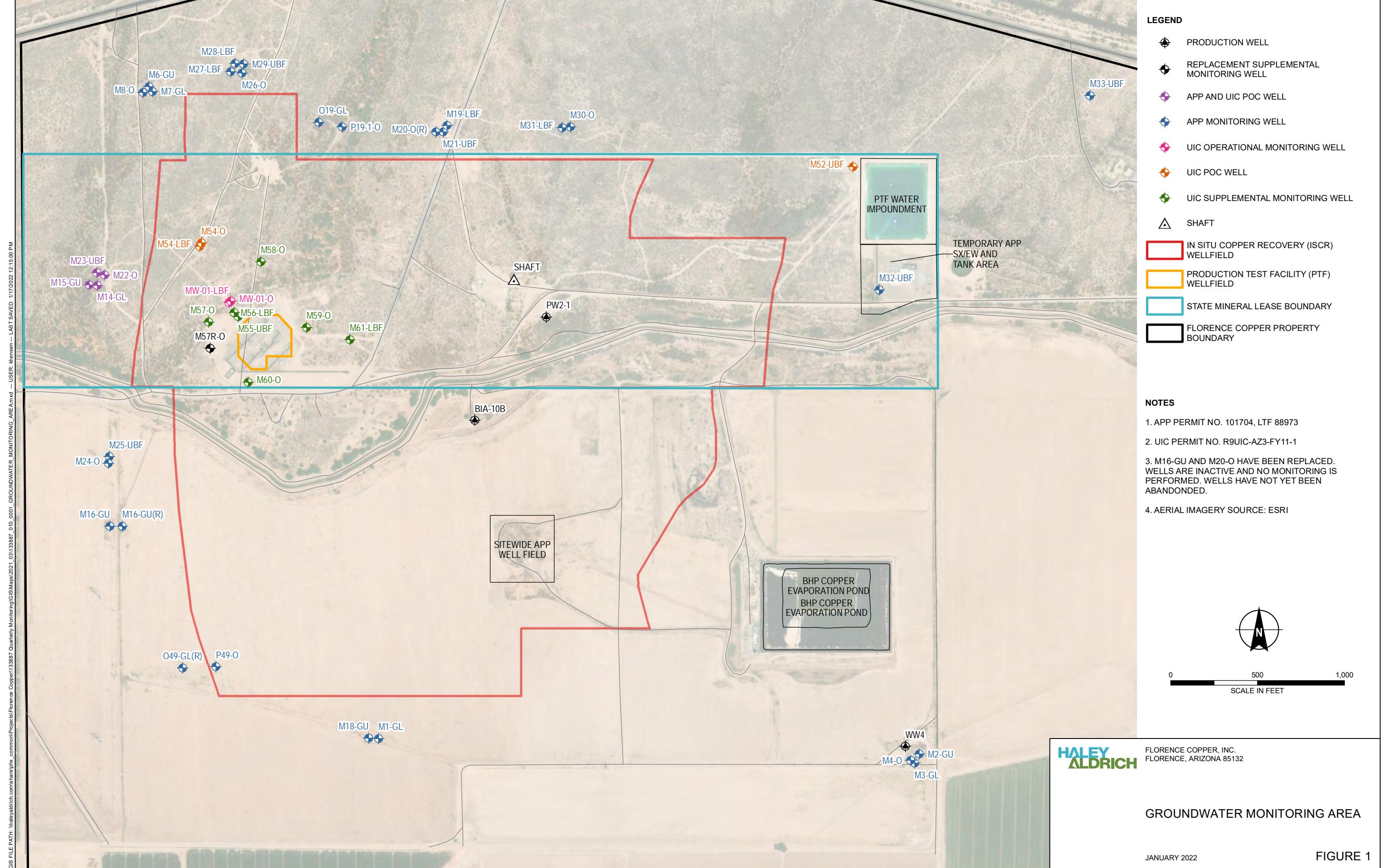


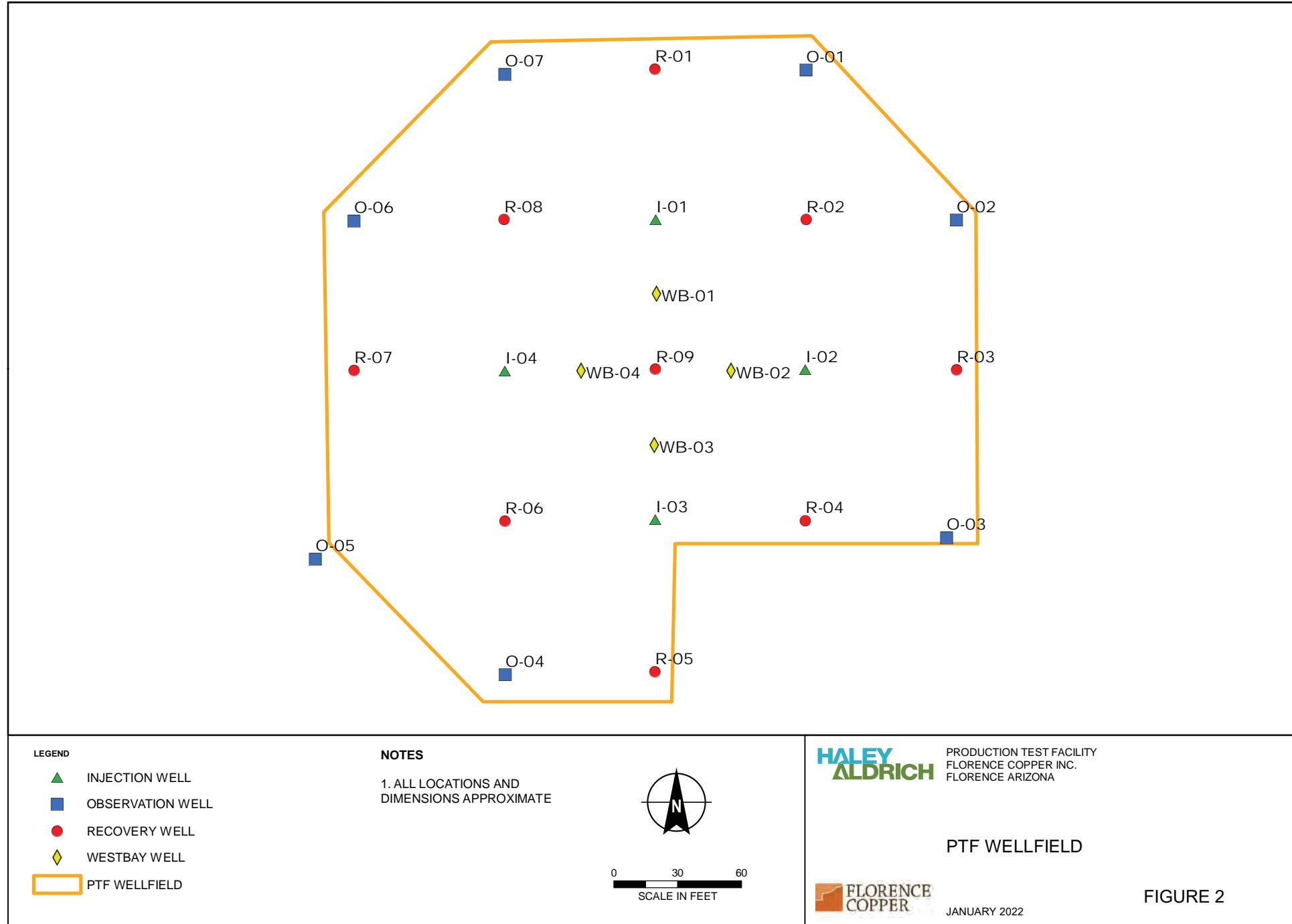
Brent Berg
General Manager

Enclosures:

- Figure 1 – Groundwater Monitoring Area
- Figure 2 – PTF Wellfield
- Attachment 1 – Map of Operational Status and Groundwater Contours
- Attachment 2 – Table and Graphs of Injected and Recovered Volumes
- Attachment 3 – Table and Graphs of the Well Head Measurements in the Production Test Facility
- Attachment 4 – Table and Graphs of Fluid Electrical Conductivity Measurements
- Attachment 5 – Table and Graphs of Bulk Electrical Conductivity Measurements
- Attachment 6 – Table and Graphs of Monitor Well Water Levels and Analytical Results
- Attachment 7 – Results of Monthly Lixiviant Organic Analysis
- Attachment 8 – Results of Mechanical Integrity Testing
- Attachment 9 – Results of Annular Conductivity Device Monitoring
- Attachment 10 – Summary of Plugging and Abandonment
- Attachment 11 – Table of Monthly Casing Annulus and Injection Pressures
- Attachment 12 – Results for Monthly Treated Water Samples
- Attachment 13 – Migratory Bird Landings

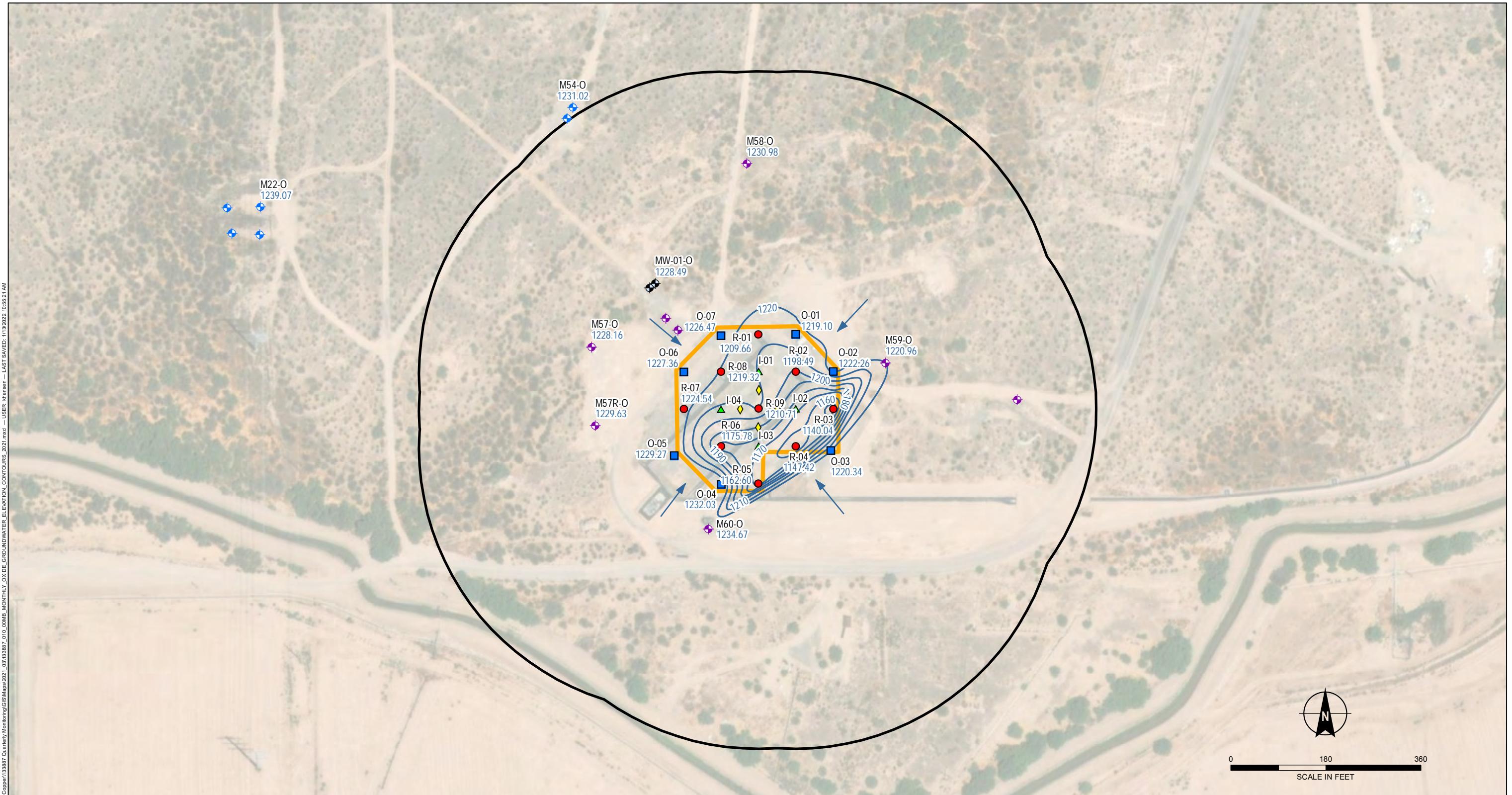
FIGURES





ATTACHMENT 1

Map of Operational Status and Groundwater Contours



LEGEND

- OBSERVATION WELL
- ▲ INJECTION WELL
- RECOVERY WELL
- ◆ WESTBAY WELL
- ◆ POINT OF COMPLIANCE (POC) WELL
- ◆ SUPPLEMENTAL MONITORING WELL
- ◆ OPERATIONAL MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR, 10-FT INTERVAL
- GROUNDWATER FLOW DIRECTION
- POLLUTANT MANAGEMENT AREA

PRODUCTION TEST FACILITY (PTF)
WELLFIELD

WELL ID
M60-O
1234.67

NOTES

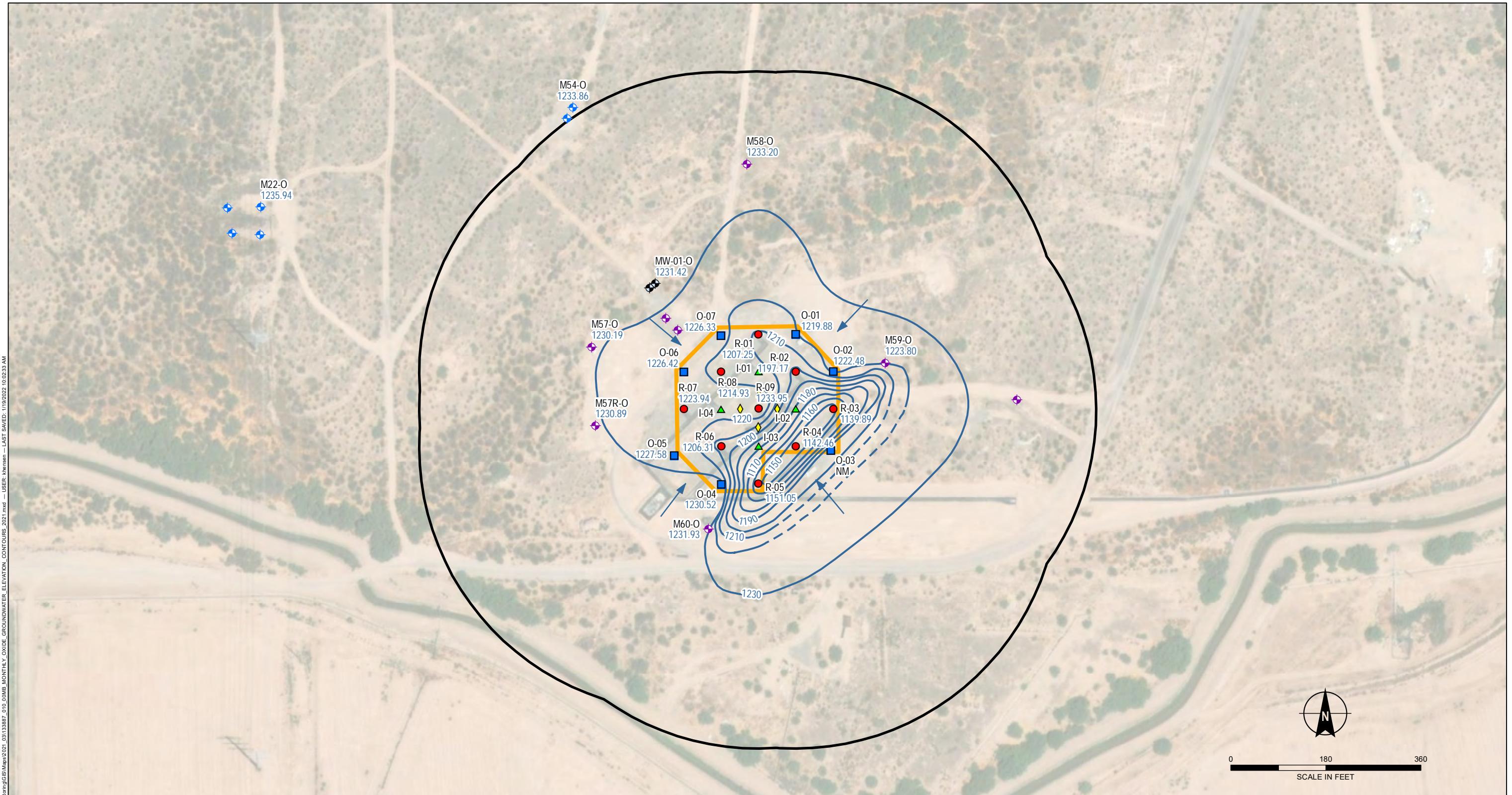
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. GROUNDWATER ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.
3. WATER LEVEL DATA WAS COLLECTED 18 OCTOBER 2021.
4. WELLS WITH ID AND ELEVATION LABEL WERE USED IN CONTOURING.
5. AERIAL IMAGERY SOURCE: ESRI

HALEY
ALDRICH

PRODUCTION TEST FACILITY
FLORENCE COPPER, INC.
FLORENCE, ARIZONA

OXIDE GROUNDWATER
ELEVATION CONTOURS
OCTOBER 2021

FIGURE 1



LEGEND

- OBSERVATION WELL
- SUPPLEMENTAL MONITORING WELL
- ▲ INJECTION WELL
- RECOVERY WELL
- ◆ WESTBAY WELL
- ◆ POINT OF COMPLIANCE (POC) WELL
- OPERATIONAL MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR, 10-FT INTERVAL; DASHED WERE INFERRED
- GROUNDWATER FLOW DIRECTION
- POLLUTANT MANAGEMENT AREA

■ PRODUCTION TEST FACILITY (PTF) WELLFIELD

WELL ID
M60-O
1231.93

NOTES

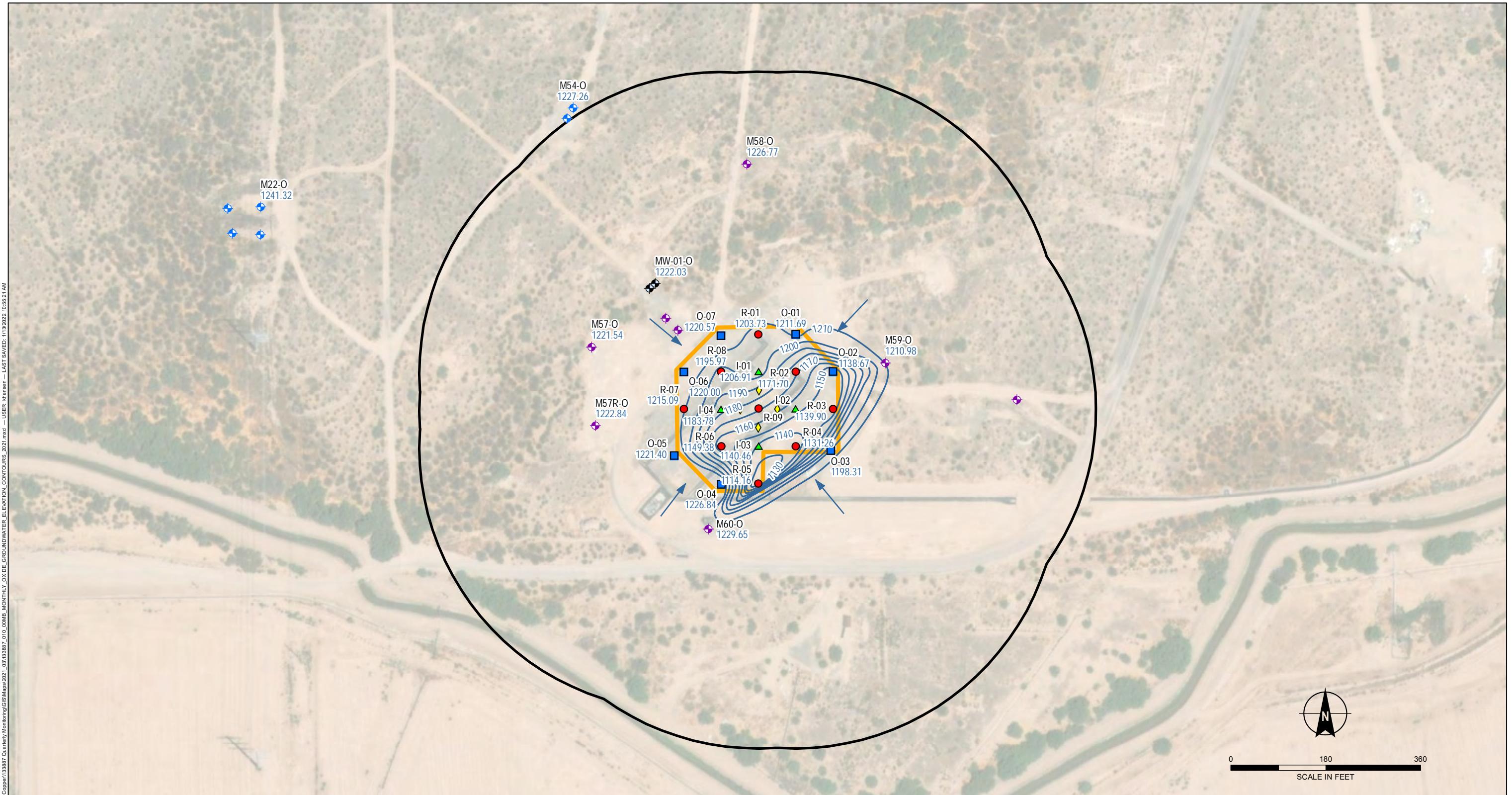
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. GROUNDWATER ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.
3. WATER LEVEL DATA WAS COLLECTED 19 NOVEMBER 2021.
4. O-03 WAS OFF FOR REDEVELOPMENT WHEN WATER DATA WAS COLLECTED
5. WELLS WITH ID AND ELEVATION LABEL WERE USED IN CONTOURING.
6. AERIAL IMAGERY SOURCE: ESRI

HALEY ALDRICH

PRODUCTION TEST FACILITY
FLORENCE COPPER, INC.
FLORENCE, ARIZONA

OXIDE GROUNDWATER
ELEVATION CONTOURS
NOVEMBER 2021

FIGURE 2



LEGEND

- OBSERVATION WELL
- ◆ INJECTION WELL
- RECOVERY WELL
- ◆ WESTBAY WELL
- ◆ POINT OF COMPLIANCE (POC) WELL
- ◆ SUPPLEMENTAL MONITORING WELL
- ◆ OPERATIONAL MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR, 10-FT INTERVAL
- GROUNDWATER FLOW DIRECTION
- POLLUTANT MANAGEMENT AREA

PRODUCTION TEST FACILITY (PTF)
WELLFIELD

WELL ID
M60-O
1229.65

GROUNDWATER ELEVATION

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. GROUNDWATER ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.
3. WATER LEVEL DATA WAS COLLECTED 21 DECEMBER 2021.
4. R-09 WAS BEING USED FOR INJECTION WHEN WATER DATA WAS COLLECTED.
5. I-01 WAS BEING USED FOR RECOVERY WHEN WATER DATA WAS COLLECTED.
6. I-02 WAS BEING USED FOR RECOVERY WHEN WATER DATA WAS COLLECTED; HOWEVER, DATA COULD NOT BE COLLECTED.
7. WELLS I-03 AND I-04 WERE BEING USED FOR RECOVERY WHEN WATER DATA WAS COLLECTED.
8. WELLS WITH ID AND ELEVATION LABEL WERE USED IN CONTOURING.
9. AERIAL IMAGERY SOURCE: ESRI

HALEY ALDRICH

PRODUCTION TEST FACILITY
FLORENCE COPPER, INC.
FLORENCE, ARIZONA

OXIDE GROUNDWATER
ELEVATION CONTOURS
DECEMBER 2021

FIGURE 3

ATTACHMENT 2

Table and Graphs of Injected and Recovered Volumes

Q4 2021 DAILY INJECTION AND RECOVERY

Page 1 of 3

VOLUMES WITH PERCENT RECOVERY

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 1. October 2021 Daily Injection and Recovery Volumes

Date	Daily Injection Volume (gallons)	Daily Recovery Volume (gallons)	Ratio Recovery/Injection	Min % recovery
10/1/2021	145,900	289,700	1.99	199
10/2/2021	145,900	288,600	1.98	198
10/3/2021	145,300	330,800	2.28	228
10/4/2021	144,000	329,030	2.28	228
10/5/2021	144,600	319,734	2.21	221
10/6/2021	144,300	326,110	2.26	226
10/7/2021	144,500	325,600	2.25	225
10/8/2021	144,600	326,300	2.26	226
10/9/2021	141,600	320,350	2.26	226
10/10/2021	85,600	242,000	2.83	283
10/11/2021	83,300	241,980	2.90	290
10/12/2021	78,500	180,700	2.30	230
10/13/2021	33,000	138,300	4.19	419
10/14/2021	0	126,850	NA	NA
10/15/2021	0	148,420	NA	NA
10/16/2021	61,200	218,260	3.57	357
10/17/2021	73,300	227,800	3.11	311
10/18/2021	73,300	227,500	3.10	310
10/19/2021	73,300	228,330	3.12	312
10/20/2021	73,300	227,800	3.11	311
10/21/2021	73,000	225,700	3.09	309
10/22/2021	22,000	173,800	7.90	790
10/23/2021	0	149,500	NA	NA
10/24/2021	0	139,100	NA	NA
10/25/2021	0	153,230	NA	NA
10/26/2021	0	155,940	NA	NA
10/27/2021	70,500	211,810	3.00	300
10/28/2021	72,900	225,110	3.09	309
10/29/2021	73,000	227,010	3.11	311
10/30/2021	43,900	190,640	4.34	434
10/31/2021	0	151,940	NA	NA
OCT Averages	73,897	227,998	3.02	302

OCT Averages	Monthly Average Injection Volume (GPM)	Monthly Average Recovery Volume (GPM)
	51	158

Notes:

% = percent

NA = Ratio not available, no injection while recovery remained consistent

GPM = gallons per minute

Injection flows were adjusted as part of rinsing program in October, with selected wells operated on different days as part of the wellfield rinsing plan or due to reverse osmosis system maintenance. All injection wells inactive on 10/14, 10/15, 10/23, 10/24, 10/25, 10/26, and 10/31.

Q4 2021 DAILY INJECTION AND RECOVERY

Page 2 of 3

VOLUMES WITH PERCENT RECOVERY

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 2. November 2021 Daily Injection and Recovery Volumes

Date	Daily Injection Volume (gallons)	Daily Recovery Volume (gallons)	Ratio Recovery/Injection	Min % recovery
11/1/2021	0	151,800	NA	NA
11/2/2021	61,900	210,490	3.40	340
11/3/2021	72,300	226,600	3.13	313
11/4/2021	72,200	226,900	3.14	314
11/5/2021	68,400	220,700	3.23	323
11/6/2021	58,500	220,000	3.76	376
11/7/2021	0	202,400	NA	NA
11/8/2021	50,000	281,100	5.62	562
11/9/2021	76,600	299,800	3.91	391
11/10/2021	72,300	227,700	3.15	315
11/11/2021	72,800	196,200	2.70	270
11/12/2021	73,000	178,400	2.44	244
11/13/2021	73,400	162,700	2.22	222
11/14/2021	73,200	161,800	2.21	221
11/15/2021	72,900	160,600	2.20	220
11/16/2021	73,000	163,610	2.24	224
11/17/2021	72,900	164,130	2.25	225
11/18/2021	73,500	143,130	1.95	195
11/19/2021	73,200	166,100	2.27	227
11/20/2021	73,200	173,400	2.37	237
11/21/2021	68,100	163,500	2.40	240
11/22/2021	58,400	162,900	2.79	279
11/23/2021	43,600	149,210	3.42	342
11/24/2021	73,100	225,300	3.08	308
11/25/2021	73,100	226,300	3.10	310
11/26/2021	73,100	221,100	3.02	302
11/27/2021	73,600	222,300	3.02	302
11/28/2021	73,300	226,500	3.09	309
11/29/2021	74,000	206,400	2.79	279
11/30/2021	74,300	199,700	2.69	269
NOV Averages	64,930	198,026	2.91	291

NOV Averages	Monthly Average Injection Volume (GPM)	Monthly Average Recovery Volume (GPM)
	45	138

Notes:

% = percent

NA = Ratio not available, no injection while recovery remained consistent

GPM = gallons per minute

11/1/2021 No injection as part of rinsing plan

Q4 2021 DAILY INJECTION AND RECOVERY

Page 3 of 3

VOLUMES WITH PERCENT RECOVERY

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 3. December 2021 Daily Injection and Recovery Volumes

Date	Daily Injection Volume (gallons)	Daily Recovery Volume (gallons)	Ratio Recovery/Injection	Min % recovery
12/1/2021	60,600	179,200	2.96	296
12/2/2021	44,100	175,700	3.98	398
12/3/2021	0	159,600	NA	NA
12/4/2021	0	170,800	NA	NA
12/5/2021	0	195,700	NA	NA
12/6/2021	45,800	199,440	4.35	435
12/7/2021	128,500	245,290	1.91	191
12/8/2021	148,900	317,600	2.13	213
12/9/2021	148,100	353,400	2.39	239
12/10/2021	145,400	344,020	2.37	237
12/11/2021	141,300	352,300	2.49	249
12/12/2021	140,800	352,300	2.50	250
12/13/2021	141,600	342,040	2.42	242
12/14/2021	141,700	341,200	2.41	241
12/15/2021	143,300	341,800	2.39	239
12/16/2021	137,000	331,900	2.42	242
12/17/2021	147,000	354,800	2.41	241
12/18/2021	145,800	352,440	2.42	242
12/19/2021	145,800	346,000	2.37	237
12/20/2021	143,500	369,900	2.58	258
12/21/2021	144,700	399,900	2.76	276
12/22/2021	144,900	397,500	2.74	274
12/23/2021	144,600	396,000	2.74	274
12/24/2021	144,700	394,800	2.73	273
12/25/2021	144,400	394,800	2.73	273
12/26/2021	142,600	396,400	2.78	278
12/27/2021	141,800	397,300	2.80	280
12/28/2021	142,200	374,300	2.63	263
12/29/2021	144,800	373,600	2.58	258
12/30/2021	145,200	391,100	2.69	269
12/31/2021	142,400	396,300	2.78	278
DEC Averages	120,371	327,014	2.66	266

DEC Averages	Monthly Average Injection Volume (GPM)	Monthly Average Recovery Volume (GPM)
	84	227

Notes:

% = percent

NA = Ratio not available, no injection while recovery remained consistent

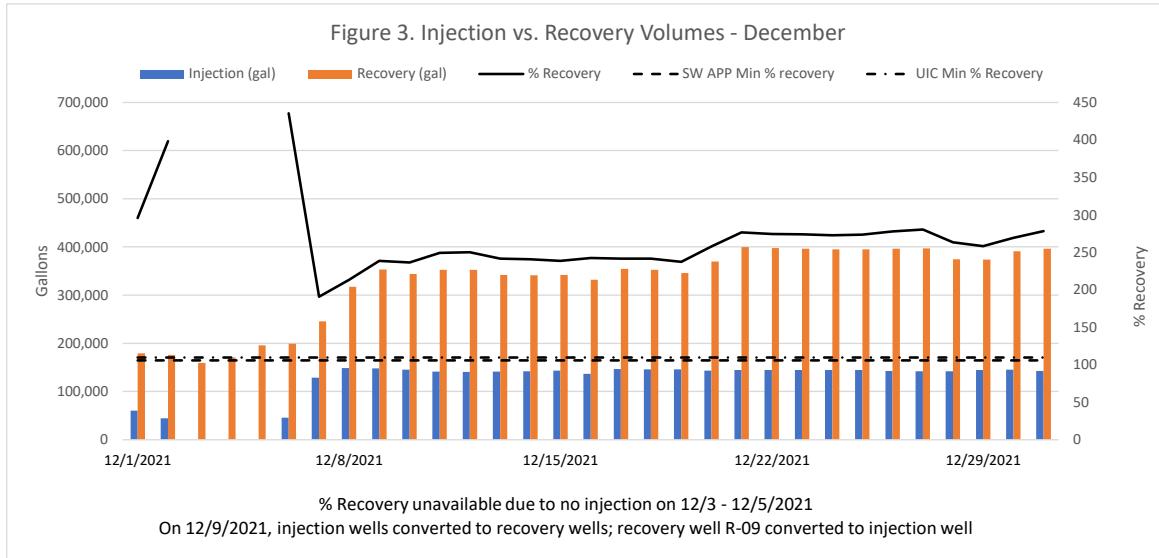
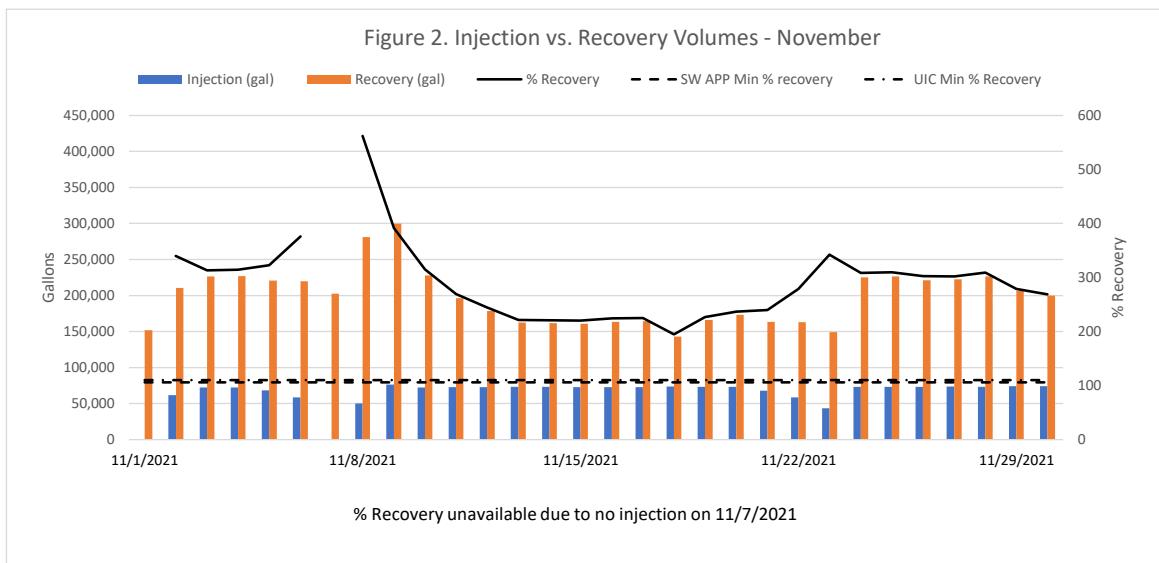
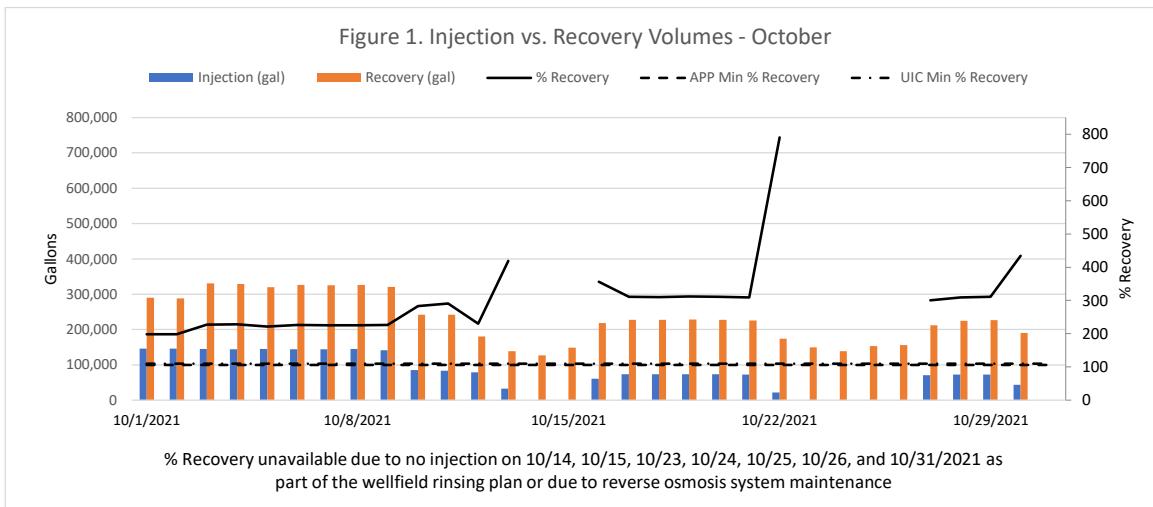
GPM = gallons per minute

12/3 - 12/5/2021: No Injection per rinsing plan

12/8/2021 Recovery well R-09 converted to injection well.

12/8/2021 I-02 and I-03 begin operation as recovery wells

12/8/2021 I-01 and I-04 converted to recovery wells but do not start operation until 12/20/2021



ATTACHMENT 3

Table and Graphs of the Well Head Measurements in the Production Test Facility

OBSERVATION AND RECOVERY WELLS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 1. October 2021 Daily Average Water Level Elevations

Date	R-01	O-01	O-07	R-02	O-01	O-02	R-03	O-02	O-03	R-04	O-03	R-05	O-04	R-06	O-04	O-05	R-07	O-05	O-06	R-08	O-06	O-07	R-09
10/1/2021	1208.04	1214.74	1220.74	1191.07	1214.74	1205.77	1140.42	1205.77	1212.40	1135.23	1212.40	1175.23	1224.82	1171.50	1224.82	1222.28	1216.45	1222.28	1220.88	1213.22	1220.88	1220.74	1199.37
10/2/2021	1212.86	1219.37	1225.51	1197.38	1219.37	1213.17	1140.42	1213.17	1217.86	1132.74	1217.86	1163.26	1228.82	1172.27	1228.82	1226.58	1220.58	1226.58	1225.55	1218.03	1225.55	1225.51	1207.28
10/3/2021	1207.51	1213.15	1220.96	1189.40	1213.15	1204.55	1139.88	1204.55	1211.42	1126.22	1211.42	1154.71	1225.95	1165.02	1225.95	1223.16	1216.76	1223.16	1221.45	1212.63	1221.45	1220.96	1195.21
10/4/2021	1210.87	1214.76	1222.60	1191.17	1214.76	1205.49	1139.88	1205.49	1209.73	1125.61	1209.73	1152.02	1226.38	1165.49	1226.38	1224.14	1218.13	1224.14	1222.92	1214.75	1222.92	1222.60	1196.94
10/5/2021	1210.87	1216.56	1224.16	1193.06	1216.56	1207.03	1139.88	1207.03	1210.96	1127.46	1210.96	1152.65	1227.49	1169.93	1227.49	1225.48	1219.62	1225.48	1224.37	1216.98	1224.37	1224.16	1198.45
10/6/2021	1209.60	1215.92	1223.58	1192.27	1215.92	1206.32	1139.88	1206.32	1210.34	1125.80	1210.34	1150.87	1227.18	1168.97	1227.18	1225.11	1219.21	1225.11	1223.88	1216.24	1223.88	1223.58	1197.78
10/7/2021	1210.25	1216.65	1224.15	1193.26	1216.65	1206.93	1139.88	1206.93	1211.13	1125.57	1211.13	1151.15	1227.78	1169.53	1227.78	1225.74	1219.81	1225.74	1224.49	1216.79	1224.49	1224.15	1198.54
10/8/2021	1211.15	1217.75	1225.11	1194.15	1217.75	1207.95	1139.91	1207.95	1212.56	1125.56	1212.56	1152.26	1228.81	1170.49	1228.81	1226.72	1220.83	1226.72	1225.47	1217.70	1225.47	1225.11	1199.83
10/9/2021	1211.75	1218.52	1225.67	1197.44	1218.52	1208.66	1139.89	1208.66	1213.68	1131.05	1213.68	1153.17	1229.45	1175.16	1229.45	1227.31	1221.43	1227.31	1226.07	1219.49	1226.07	1225.67	1200.43
10/10/2021	1214.81	1221.86	1227.71	1205.30	1221.86	1212.77	1139.89	1212.77	1219.13	1153.29	1219.13	1159.21	1231.19	1183.77	1231.19	1228.99	1223.12	1228.99	1227.76	1221.61	1227.76	1227.71	1214.51
10/11/2021	1212.05	1218.84	1224.76	1200.61	1218.84	1209.86	1139.83	1209.86	1216.11	1148.89	1216.11	1155.30	1227.73	1174.49	1227.73	1225.66	1219.95	1225.66	1224.71	1217.81	1224.71	1224.76	1212.32
10/12/2021	1215.55	1222.24	1226.88	1212.28	1222.24	1219.43	1143.78	1219.43	1219.81	1156.21	1219.81	1174.44	1228.87	1201.36	1228.87	1227.29	1222.78	1227.29	1226.58	1224.24	1226.58	1226.88	1211.73
10/13/2021	1218.98	1224.14	1228.66	1217.54	1224.14	1226.68	1146.51	1226.68	1222.91	1154.72	1222.91	1191.10	1230.94	1216.21	1230.94	1229.19	1224.96	1229.19	1228.15	1225.72	1228.15	1228.66	1215.40
10/14/2021	1210.61	1221.82	1227.86	1219.46	1221.82	1224.84	1141.98	1224.84	1221.19	1148.47	1221.19	1166.82	1231.52	1216.47	1231.52	1229.57	1225.18	1229.57	1228.23	1226.09	1228.23	1227.86	1230.21
10/15/2021	1209.04	1219.91	1226.73	1201.46	1219.91	1222.75	1140.14	1222.75	1219.85	1147.78	1219.85	1157.47	1231.30	1215.72	1231.30	1229.11	1224.44	1229.11	1227.35	1221.74	1227.35	1226.73	1230.89
10/16/2021	1208.68	1218.31	1225.45	1198.40	1218.31	1221.45	1140.30	1221.45	1220.07	1147.99	1220.07	1163.50	1230.76	1179.74	1230.76	1228.08	1223.35	1228.08	1226.25	1218.16	1226.25	1225.45	1211.78
10/17/2021	1209.24	1218.80	1226.11	1198.43	1218.80	1222.00	1140.04	1222.00	1220.98	1147.57	1220.98	1162.70	1231.53	1175.66	1231.53	1228.80	1224.09	1228.80	1226.95	1218.87	1226.95	1226.11	1210.52
10/18/2021	1209.66	1219.10	1226.47	1198.49	1219.10	1222.26	1140.04	1222.26	1220.34	1147.42	1220.34	1162.60	1232.03	1175.78	1232.03	1229.27	1224.54	1229.27	1227.36	1219.32	1227.36	1226.47	1210.71
10/19/2021	1208.62	1217.59	1225.65	1196.79	1217.59	1216.71	1139.98	1216.71	1219.94	1147.08	1219.94	1161.61	1231.69	1175.07	1231.69	1228.77	1223.92	1228.77	1226.67	1218.63	1226.67	1225.65	1209.71
10/20/2021	1210.04	1219.35	1226.75	1198.53	1219.35	1222.70	1140.09	1222.70	1221.50	1147.24	1221.50	1162.52	1232.55	1175.86	1232.55	1229.52	1224.73	1229.52	1227.55	1219.54	1227.55	1226.75	1211.03
10/21/2021	1211.45	1220.06	1227.45	1199.04	1220.06	1223.38	1140.15	1223.38	1222.10	1147.25	1222.10	1162.98	1233.15	1176.49	1233.15	1230.28	1225.56	1230.28	1228.31	1220.15	1228.31	1227.45	1211.70
10/22/2021	1211.75	1221.46	1228.12	1200.91	1221.46	1224.09	1140.66	1224.09	1221.65	1147.67	1221.65	1165.18	1233.46	1205.52	1233.46	1230.91	1226.19	1230.91	1228.50	1220.54	1228.50	1228.12	1226.76
10/23/2021	1212.30	1221.10	NA	1200.41	1221.10	1223.84	1140.18	1223.84	1221.03	1146.80	1221.03	1162.15	1232.37	1216.70	1232.37	1230.07	1225.40	1230.07	NA	1219.77	NA	NA	1231.71
10/24/2021	1212.43	1221.84	1227.64	1203.76	1221.84	1224.75	1141.46	1224.75	1222.10	1148.09	1222												

Table 2. November 2021 Daily Average Water Level Elevations

Date	R-01	O-01	O-07	R-02	O-01	O-02	R-03	O-02	O-03	R-04	O-03	R-05	O-04	R-06	O-04	O-05	R-07	O-05	O-06	R-08	O-06	O-07	R-09
11/1/2021	1209.28	1220.01	1226.25	1198.84	1220.01	1222.36	1139.93	1222.36	1217.86	1139.20	1217.86	1146.28	1230.30	1214.69	1230.30	1228.23	1223.32	1228.23	1226.17	1219.37	1226.17	1226.25	1229.77
11/2/2021	NA	1219.37	1226.14	1197.71	1219.37	1219.75	1140.17	1219.75	1218.54	1139.59	1218.54	1144.28	1230.25	1188.51	1230.25	1228.04	1223.81	1228.04	1226.23	1219.59	1226.23	1226.14	1214.41
11/3/2021	NA	1217.19	1224.12	1195.18	1217.19	1217.99	1139.90	1217.99	1216.17	1138.08	1216.17	1135.37	1228.46	1175.87	1228.46	1226.17	1222.03	1226.17	1224.39	1217.70	1224.39	1224.12	1208.84
11/4/2021	NA	1216.40	1223.34	1194.22	1216.40	1219.58	1139.89	1219.58	1215.24	1137.60	1215.24	1135.24	1227.53	1174.71	1227.53	1225.28	1221.19	1225.28	1223.55	1216.78	1223.55	1223.34	1207.89
11/5/2021	NA	1216.01	1222.92	1193.76	1216.01	1219.26	1140.23	1219.26	1214.79	1138.63	1214.79	1137.55	1226.70	1176.38	1226.70	1224.52	1220.51	1224.52	1222.93	1216.30	1222.93	1222.92	1208.61
11/6/2021	NA	1214.07	1221.09	1187.05	1214.07	1217.17	1140.04	1217.17	1212.61	1138.05	1212.61	1136.09	1224.70	1171.53	1224.70	1222.51	1218.53	1222.51	1221.06	1213.65	1221.06	1221.09	1206.51
11/7/2021	NA	1209.40	1217.35	1156.34	1209.40	1212.40	1141.06	1212.40	1207.71	1144.19	1207.71	1138.04	1220.42	1140.25	1220.42	1218.14	1214.61	1218.14	1217.12	1214.40	1217.12	1217.35	1207.76
11/8/2021	1185.65	1199.83	1209.86	1119.70	1199.83	1203.78	1139.97	1203.78	1201.70	1142.31	1201.70	1143.96	1214.65	1112.57	1214.65	1211.76	1208.19	1211.76	1210.24	NA	1210.24	1209.86	1180.12
11/9/2021	1185.65	1200.78	1211.16	1121.21	1200.78	1205.04	1139.91	1205.04	1203.41	1142.33	1203.41	1146.42	1216.85	1112.66	1216.85	1213.94	1210.43	1213.94	1212.14	NA	1212.14	1211.16	1183.24
11/10/2021	1196.95	1209.31	1218.01	1176.16	1209.31	1213.61	1139.90	1213.61	NA	1143.59	NA	1153.32	1224.03	1152.55	1224.03	1220.60	1216.77	1220.60	1218.73	NA	1218.73	1218.01	1200.87
11/11/2021	1205.56	1217.28	1224.89	1197.49	1217.28	1221.38	1139.99	1221.38	NA	1145.45	NA	1163.60	1225.13	1176.30	1225.13	1227.18	1223.93	1227.18	1225.52	NA	1225.52	1224.89	1211.85
11/12/2021	1207.78	1220.12	1227.30	1199.14	1220.12	1223.39	1139.92	1223.39	NA	1144.46	NA	1155.36	1228.73	1172.58	1228.73	1228.84	1226.21	1228.84	1227.75	NA	1227.75	1227.30	1210.59
11/13/2021	1212.46	1224.64	1231.20	1202.61	1224.64	1227.90	1139.89	1227.90	NA	1143.89	NA	1152.60	1232.27	1172.05	1232.27	1231.81	1229.49	1231.81	1231.27	NA	1231.27	1231.20	1233.90
11/14/2021	1214.17	1225.87	1232.23	1203.71	1225.87	1229.11	1139.91	1229.11	NA	1144.01	NA	1153.42	1234.92	1172.69	1234.92	1232.66	1230.49	1232.66	1232.24	NA	1232.24	1232.23	1240.43
11/15/2021	1215.24	1225.64	1231.89	1203.66	1225.64	1229.02	1139.89	1229.02	NA	1143.90	NA	1153.07	1234.74	1171.98	1234.74	1232.30	1229.47	1232.30	1231.76	NA	1231.76	1231.89	1240.05
11/16/2021	1214.13	1224.80	1231.51	1203.32	1224.80	1228.70	1139.86	1228.70	NA	1144.02	NA	1155.73	1234.26	1173.50	1234.26	1231.84	1228.65	1231.84	1231.38	NA	1231.38	1231.51	1239.78
11/17/2021	1213.64	1224.70	1231.31	1205.03	1224.70	1229.09	1140.33	1229.09	NA	1145.57	NA	1162.08	1234.69	1220.86	1234.69	1232.27	1229.76	1232.27	1231.56	NA	1231.56	1231.31	1240.82
11/18/2021	1220.21	1224.35	1230.03	1201.50	1224.35	1226.45	1139.90	1226.45	NA	1143.34	NA	1155.54	1232.90	1219.39	1232.90	1230.71	1226.87	1230.71	1229.76	1200.34	1229.76	1230.03	1238.08
11/19/2021	1207.25	1219.88	1226.33	1197.17	1219.88	1222.48	1139.89	1222.48	NA	1142.46	NA	1151.05	1230.52	1206.31	1230.52	1227.58	1223.94	1227.58	1226.42	1214.93	1226.42	1226.33	1233.95
11/20/2021	1209.61	1221.34	1227.61	1199.16	1221.34	1224.53	1139.88	1224.53	NA	1143.47	NA	1154.57	1232.59	1217.94	1232.59	1229.32	1225.63	1229.32	1228.15	1213.96	1228.15	1227.61	1236.16
11/21/2021	1211.10	1222.71	1228.93	1201.75	1222.71	1226.42	1140.14	1226.42	NA	1144.44	NA	1158.59	1234.66	1219.47	1234.66	1231.01	1227.22	1231.01	1229.62	1213.72	1229.62	1228.93	1237.41
11/22/2021	1211.96	1223.52	1229.61	1202.35	1223.52	1226.54	1140.17	1226.54	NA	1144.62	NA	1159.72	1235.35	1219.88	1235.35	1231.68	1227.80	1231.68	1230.29	1213.42	1230.29	1229.61	1237.81
11/23/2021	1208.21	1219.53	1226.16	1198.88	1219.53	1222.37	1143.23	1222.37	NA	1144.68	NA	1158.65	1232.93	1215.13	1232.93	1228.51	1224.93	1228.51	1226.97	1205.32	1226.97	1226.16	1231.38
11/24/2021	1206.89	1217.47	1224.54	1196.46	1217.47	1220.37	1140.19	1220.37	NA	1145.50	NA	1160.91	1232.12	1185.58	1232.12	1227.30	1223.42	1227.30	1225.59	1207.70	1225.59	1224.54	1210.03
11/25/2021	1208.35	1218.62	1225.18	1197.92	1218.62	1222.26	1140.																

OBSERVATION AND RECOVERY WELLS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 3. December 2021 Daily Average Water Level Elevations

Date	R-01	O-01	O-07	R-02	O-01	O-02	R-03	O-02	O-03	R-04	O-03	R-05	O-04	R-06	O-04	O-05	R-07	O-05	O-06	R-08	O-06	O-07	R-09
12/1/2021	1211.67	1221.61	1228.31	1204.32	1221.61	1225.12	1142.29	1225.12	NA	1148.94	NA	1172.82	1235.86	1187.17	1235.86	1231.16	NA	1231.16	1229.52	1208.25	1229.52	1228.31	1217.03
12/2/2021	1212.39	1223.87	1230.34	1204.41	1223.87	1227.31	1143.03	1227.31	1221.68	1149.06	1221.68	1171.76	1237.29	1199.64	1237.29	1232.86	NA	1232.86	1231.41	1213.99	1231.41	1230.34	1218.32
12/3/2021	1210.47	1220.39	1227.80	1199.86	1220.39	1224.19	1141.67	1224.19	1218.77	1148.38	1218.77	1169.97	1236.07	1211.51	1236.07	1231.22	NA	1231.22	1229.13	1214.69	1229.13	1227.80	1214.09
12/4/2021	1210.73	1220.63	1228.04	1199.79	1220.63	1224.39	1141.53	1224.39	1218.91	1147.57	1218.91	1168.96	1235.92	1199.15	1235.92	1231.21	NA	1231.21	1229.34	1217.21	1229.34	1228.04	1214.07
12/5/2021	1208.43	1218.20	1225.36	1197.27	1218.20	1222.03	1141.08	1222.03	1216.82	1146.76	1216.82	1166.49	1233.95	1185.79	1233.95	1228.90	NA	1228.90	1226.66	1203.09	1226.66	1225.36	1211.14
12/6/2021	1212.21	1221.58	1227.87	1201.14	1221.58	1224.93	1141.48	1224.93	1219.23	1147.11	1219.23	1168.86	1235.27	1183.41	1235.27	1230.39	NA	1230.39	1228.69	1201.09	1228.69	1227.87	1214.83
12/7/2021	1219.11	1229.81	1235.34	1201.80	1229.81	1231.99	1140.69	1231.99	1223.27	1142.80	1223.27	1154.86	1240.01	1184.71	1240.01	1235.88	1232.71	1235.88	1235.43	1213.54	1235.43	1235.34	1223.39
12/8/2021	1213.77	NA	1231.18	1192.44	NA	1228.61	1139.80	1228.61	1210.31	1137.21	1210.31	1137.56	1237.16	1167.51	1237.16	1233.35	1208.88	1233.35	1229.94	1205.81	1229.94	1231.18	1285.89
12/9/2021	1206.57	NA	1227.05	1181.85	NA	1221.19	1139.86	1221.19	1203.67	1135.53	1203.67	1128.38	1232.81	1156.21	1232.81	1228.13	1222.86	1228.13	1227.45	1198.09	1227.45	1227.05	1315.95
12/10/2021	1207.91	NA	1226.93	1180.45	NA	1219.72	1139.91	1219.72	1203.87	1134.58	1203.87	1141.85	1233.00	1159.91	1233.00	1228.17	1222.77	1228.17	1227.36	1197.99	1227.36	1226.93	1310.59
12/11/2021	1205.54	NA	1225.79	1180.90	NA	1220.31	1139.90	1220.31	1202.94	1134.67	1202.94	1133.96	1232.20	1157.22	1232.20	1227.37	1221.91	1227.37	1226.56	1196.80	1226.56	1225.79	1305.17
12/12/2021	1205.53	NA	1225.26	1180.31	NA	1219.88	1139.88	1219.88	1203.37	1134.17	1203.37	1126.19	1231.89	1155.96	1231.89	1227.04	1221.48	1227.04	1226.21	1197.38	1226.21	1225.26	1302.22
12/13/2021	1206.43	NA	1225.56	1181.78	NA	1220.75	1139.89	1220.75	1204.83	1135.58	1204.83	1131.63	1232.53	1157.49	1232.53	1227.64	1222.17	1227.64	1226.82	1202.16	1226.82	1225.56	1300.06
12/14/2021	1212.90	NA	1226.99	1181.52	NA	1221.52	1139.87	1221.52	1204.50	1133.52	1204.50	1125.94	1232.62	1155.50	1232.62	1227.88	1222.42	1227.88	1227.25	1201.50	1227.25	1226.99	1310.50
12/15/2021	1209.14	NA	1226.15	1180.36	NA	1221.46	1139.90	1221.46	1211.35	1133.17	1211.35	1125.21	1232.53	1154.49	1232.53	1227.56	1221.90	1227.56	1226.73	1205.45	1226.73	1226.15	1313.39
12/16/2021	1209.71	NA	1226.23	1182.58	NA	1221.61	1139.96	1221.61	1213.50	1134.00	1213.50	1129.66	1232.53	1157.26	1232.53	1227.60	1222.12	1227.60	1226.74	1204.39	1226.74	1226.23	1308.86
12/17/2021	1209.04	1219.21	1226.25	1180.44	1219.21	1220.90	1139.91	1220.90	1203.96	1131.49	1203.96	1126.99	1232.12	1156.13	1232.12	1227.39	1221.96	1227.39	1226.66	1198.95	1226.66	1226.25	1315.64
12/18/2021	1209.86	1219.26	1225.99	1179.78	1219.26	1220.19	1139.91	1220.19	1202.63	1130.94	1202.63	1120.63	1231.70	1155.44	1231.70	1226.96	1221.52	1226.96	1226.24	1204.39	1226.24	1225.99	1310.53
12/19/2021	1213.29	1220.32	1226.75	1180.61	1220.32	1221.30	1139.91	1221.30	1203.18	1130.68	1203.18	1126.41	1232.12	1155.91	1232.12	1227.50	1222.14	1227.50	1226.92	1208.20	1226.92	1226.75	1309.41
12/20/2021	1209.13	1217.25	1224.59	1179.04	1217.25	1221.29	1139.92	1221.29	1202.79	1131.30	1202.79	1124.79	1230.40	1152.87	1230.40	1225.38	1219.62	1225.38	1224.48	1197.77	1224.48	1224.59	1302.27
12/21/2021	1203.73	1211.69	1220.57	1171.70	1211.69	NA	1139.90	NA	1198.31	1131.26	1198.31	1114.16	1226.84	1149.38	1226.84	1221.40	1215.09	1221.40	1220.00	1195.97	1220.00	1220.57	1295.46
12/22/2021	1205.19	1212.01	1220.85	1175.03	1212.01	NA	1139.89	NA	1196.43	1130.42	1196.43	1111.76	1226.67	1151.71	1226.67	1221.36	1215.32	1221.36	1220.09	1202.54	1220.09	1220.85	1295.44
12/23/2021	1205.99	1212.83	1221.42	1175.19	1212.83	NA	1139.86	NA	1197.64	1130.19	1197.64	1112.45	1227.10	1152.25	1227.10	1221.86	1215.76	1221.86	1220.56	1214.57	1220.56	1221.42	1293.94
12/24/2021	1209.43	1213.38	1221.75	1171.10	1213.38	1214.69	1139.86	1214.69	1198.30	1129.96	1198.30	1112.99	1227.50	1152.81	1227.50	1222.25	1216.24	1222.25	1220.99	1205.68	1220.99	1221.75	1295.75
12/25/2021</td																							

Hydraulic Gradient - Daily Average Water Level Elevations - Observation and Recovery Wells

Figure 1a. Q4 Water Levels

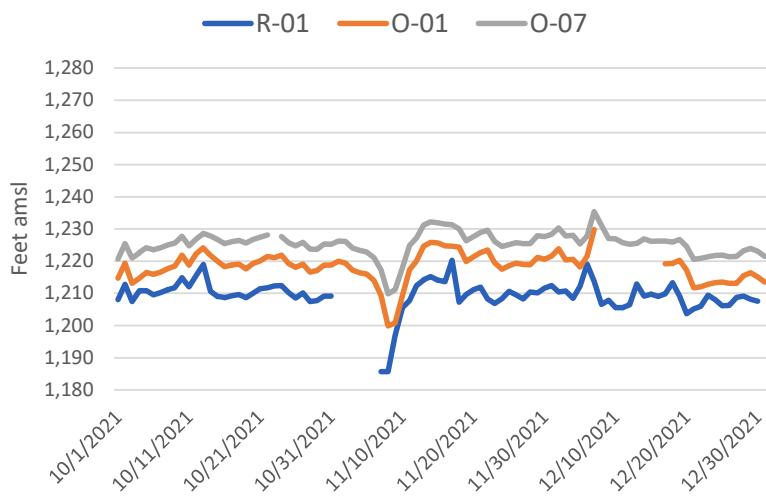


Figure 1b. Q4 Water Levels

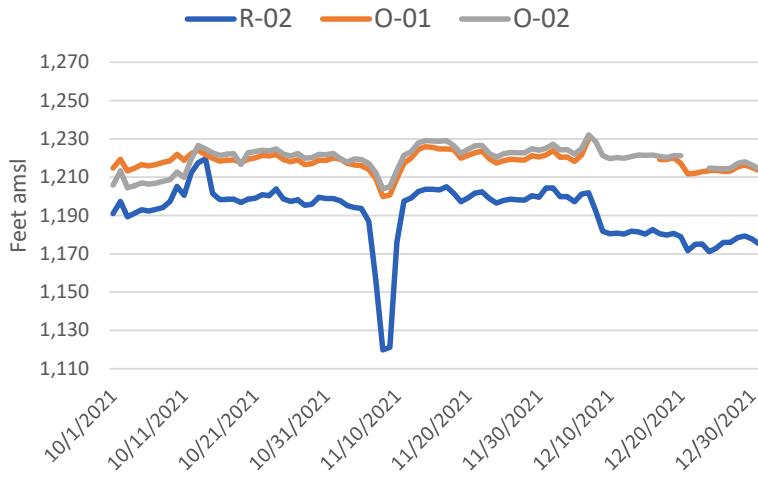


Figure 1c. Q4 Water Levels

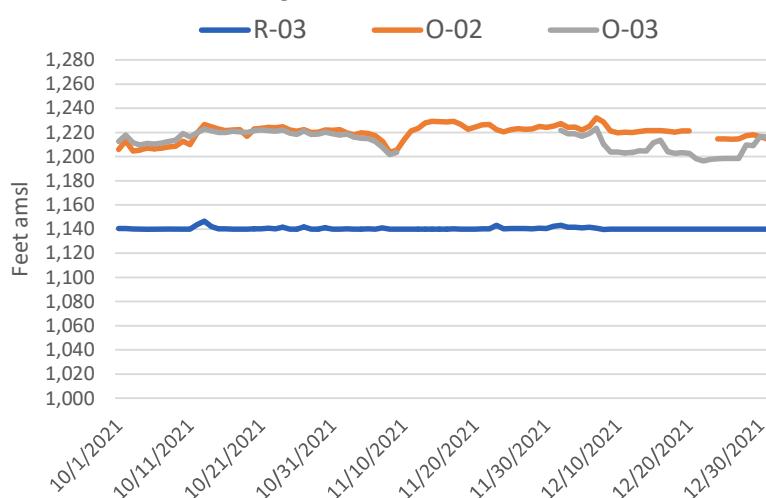
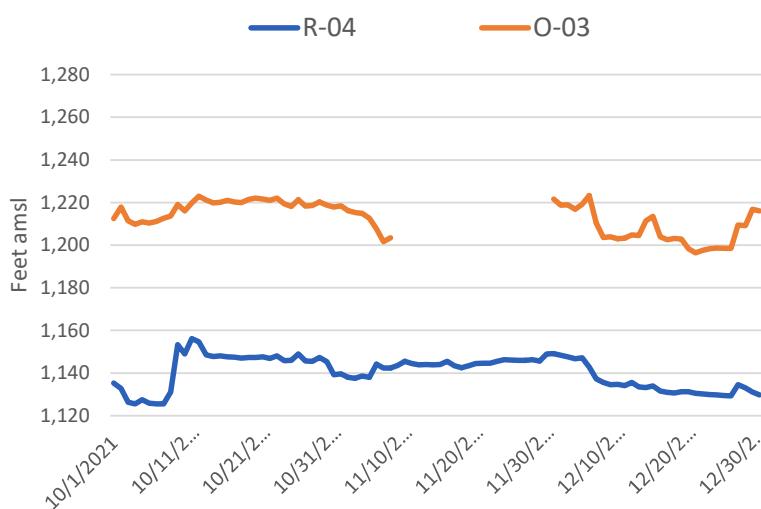


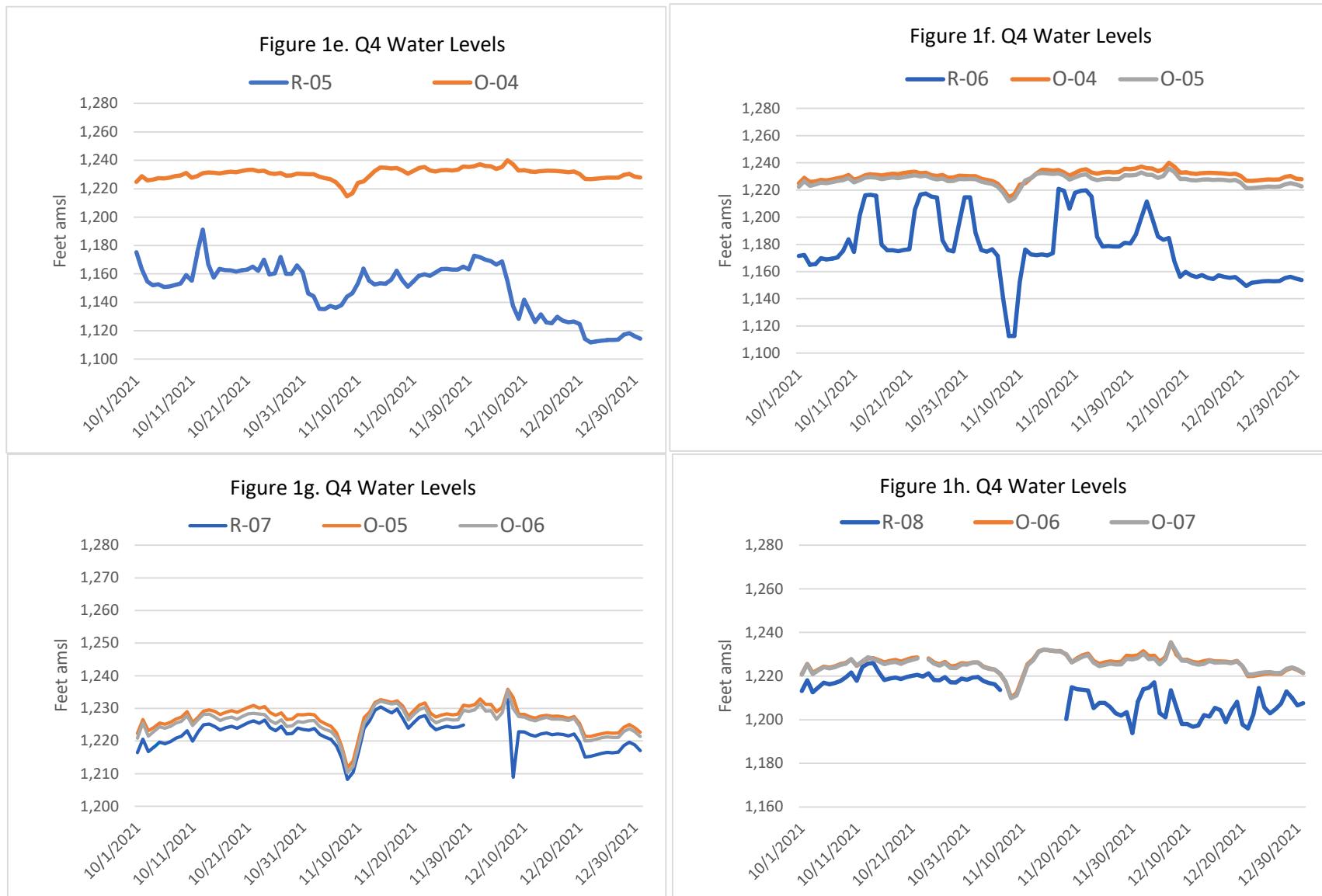
Figure 1d. Q4 Water Levels



Notes:

Refer to preceding Daily Average Water Level Elevations Tables (Tables 1 - 3) for details on missing data points.

Hydraulic Gradient - Daily Average Water Level Elevations - Observation and Recovery Wells



Notes:

Refer to preceding Daily Average Water Level Elevations Tables (Tables 1 - 3) for details on missing data points.

Q4 2021 DAILY HYDRAULIC GRADIENT FOR RECOVERY WELL PAIRINGS

Page 1 of 3

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 4. October 2021 Daily Average Gradients

Date	R-01		R-02		R-03		R-04	R-05	R-06		R-07		R-08		All Gradients <1 foot?
	O-01	O-07	O-01	O-02	O-02	O-03	O-03	O-04	O-04	O-05	O-05	O-06	O-06	O-07	
10/1/2021	6.69	12.69	23.66	14.70	65.35	71.98	77.17	49.59	53.32	50.77	5.83	4.43	7.66	7.52	Yes
10/2/2021	6.51	12.64	21.98	15.78	72.75	77.44	85.12	65.55	56.55	54.31	6.01	4.98	7.53	7.48	Yes
10/3/2021	5.64	13.45	23.76	15.16	64.67	71.53	85.20	71.24	60.93	58.14	6.40	4.68	8.82	8.33	Yes
10/4/2021	3.89	11.73	23.60	14.32	65.61	69.85	84.12	74.37	60.90	58.66	6.01	4.79	8.18	7.86	Yes
10/5/2021	5.68	13.29	23.50	13.97	67.15	71.08	83.50	74.84	57.57	55.55	5.85	4.75	7.39	7.18	Yes
10/6/2021	6.32	13.98	23.65	14.05	66.44	70.46	84.54	76.31	58.21	56.15	5.91	4.68	7.65	7.34	Yes
10/7/2021	6.40	13.90	23.39	13.67	67.04	71.24	85.55	76.63	58.25	56.21	5.93	4.67	7.69	7.36	Yes
10/8/2021	6.61	13.96	23.61	13.80	68.04	72.65	87.00	76.55	58.32	56.23	5.90	4.65	7.77	7.41	Yes
10/9/2021	6.77	13.92	21.08	11.22	68.77	73.79	82.63	76.28	54.29	52.15	5.88	4.64	6.58	6.18	Yes
10/10/2021	7.05	12.90	16.56	7.47	72.88	79.24	65.84	71.98	47.42	45.22	5.87	4.65	6.15	6.10	Yes
10/11/2021	6.79	12.70	18.23	9.25	70.03	76.28	67.22	72.43	53.24	51.17	5.72	4.76	6.90	6.95	Yes
10/12/2021	6.69	11.33	9.96	7.15	75.65	76.03	63.60	54.43	27.50	25.92	4.50	3.80	2.34	2.63	Yes
10/13/2021	5.17	9.68	6.60	9.14	80.17	76.40	68.19	39.85	14.73	12.98	4.23	3.19	2.43	2.94	Yes
10/14/2021	11.21	17.25	2.36	5.38	82.86	79.21	72.72	64.70	15.05	13.10	4.39	3.05	2.14	1.77	Yes
10/15/2021	10.87	17.69	18.45	21.29	82.61	79.71	72.07	73.83	15.58	13.39	4.67	2.91	5.61	4.99	Yes
10/16/2021	9.63	16.78	19.91	23.05	81.15	79.77	72.08	67.25	51.01	48.34	4.73	2.89	8.09	7.29	Yes
10/17/2021	9.55	16.86	20.37	23.57	81.96	80.93	73.41	68.83	55.86	53.13	4.70	2.86	8.09	7.24	Yes
10/18/2021	9.44	16.81	20.61	23.77	82.22	80.30	72.92	69.43	56.25	53.49	4.73	2.82	8.03	7.15	Yes
10/19/2021	8.97	17.03	20.80	19.92	76.73	79.97	72.86	70.07	56.62	53.71	4.86	2.76	8.04	7.02	Yes
10/20/2021	9.31	16.72	20.82	24.17	82.61	81.40	74.25	70.03	56.69	53.66	4.79	2.81	8.00	7.21	Yes
10/21/2021	8.60	15.99	21.02	24.35	83.23	81.94	74.85	70.17	56.66	53.79	4.72	2.75	8.16	7.30	Yes
10/22/2021	9.70	16.37	20.54	23.18	83.44	80.99	73.98	68.28	27.95	25.39	4.72	2.31	7.96	7.58	Yes
10/23/2021	8.80	NA	20.69	23.43	83.66	80.85	74.23	70.23	15.67	13.36	4.67	NA	NA	NA	Yes
10/24/2021	9.41	15.21	18.09	20.99	83.29	80.64	74.01	62.59	15.35	13.18	4.15	1.72	6.84	6.38	Yes
10/25/2021	9.02	15.49	20.62	23.49	82.26	79.49	73.60	71.50	15.81	13.47	4.65	2.24	8.12	7.61	Yes
10/26/2021	9.50	16.19	20.82	23.83	81.13	78.25	72.27	69.90	16.01	13.51	4.70	2.20	7.34	6.76	Yes
10/27/2021	8.97	15.72	20.94	24.25	80.65	79.52	72.38	59.11	47.99	45.50	4.11	1.95	6.92	6.32	Yes
10/28/2021	9.18	16.37	21.26	24.53	79.98	78.44	72.74	69.07	53.20	50.57	4.46	2.33	7.28	6.64	Yes
10/29/2021	9.37	15.95	21.26	24.41	80.37	78.67	73.04	69.36	54.51	51.83	4.41	2.38	7.58	6.61	Yes
10/30/2021	9.72	16.22	19.35	22.49	80.84	79.10	72.93	64.54	35.15	32.73	4.13	1.98	7.09	6.46	Yes
10/31/2021	9.71	16.17	19.98	22.92	81.87	78.92	73.43	69.29	15.73	13.39	4.50	2.23	7.46	7.03	Yes

Notes:

All measurements in elevation above mean sea level.

NA or NM = Not measured or otherwise not available

No data were available for the following dates/wells:

O-06 and O-07 pump and instrumentation pulled all day for well logging tests on October 23, 2021

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 5. November 2021 Daily Average Gradients

Date	R-01		R-02		R-03		R-04	R-05	R-06		R-07		R-08		All Gradients <1 foot?
	O-01	O-07	O-01	O-02	O-02	O-03	O-03	O-04	O-04	O-05	O-05	O-06	O-06	O-07	
11/1/2021	10.73	16.97	21.16	23.51	82.43	77.94	78.66	84.02	15.62	13.54	4.91	2.85	6.80	6.88	Yes
11/2/2021	NA	NA	21.66	22.04	79.58	78.37	78.95	85.98	41.74	39.53	4.23	2.42	6.64	6.55	Yes
11/3/2021	NA	NA	22.01	22.81	78.09	76.27	78.09	93.09	52.60	50.31	4.14	2.36	6.70	6.42	Yes
11/4/2021	NA	NA	22.18	25.36	79.70	75.35	77.63	92.29	52.82	50.57	4.09	2.36	6.77	6.55	Yes
11/5/2021	NA	NA	22.25	25.50	79.03	74.56	76.16	89.15	50.32	48.14	4.01	2.42	6.63	6.62	Yes
11/6/2021	NA	NA	27.02	30.12	77.13	72.57	74.56	88.61	53.17	50.98	3.98	2.53	7.41	7.44	Yes
11/7/2021	NA	NA	53.06	56.06	71.34	66.65	63.53	82.38	80.17	77.89	3.54	2.51	2.72	2.95	Yes
11/8/2021	14.18	24.21	80.13	84.07	63.81	61.73	59.39	70.69	102.08	99.19	3.58	2.05	NA	NA	Yes
11/9/2021	15.13	25.51	79.57	83.84	65.13	63.50	61.08	70.43	104.20	101.28	3.51	1.71	NA	NA	Yes
11/10/2021	12.37	21.06	33.16	37.45	73.71	NA	NA	70.72	71.48	68.05	3.83	1.96	NA	NA	Yes
11/11/2021	11.72	19.33	19.79	23.89	81.39	NA	NA	61.53	48.82	50.87	3.24	1.58	NA	NA	Yes
11/12/2021	12.34	19.52	20.98	24.25	83.47	NA	NA	73.36	56.15	56.27	2.63	1.54	NA	NA	Yes
11/13/2021	12.19	18.74	22.04	25.29	88.01	NA	NA	79.67	60.22	59.76	2.32	1.78	NA	NA	Yes
11/14/2021	11.70	18.06	22.17	25.40	89.20	NA	NA	81.50	62.23	59.97	2.18	1.75	NA	NA	Yes
11/15/2021	10.41	16.66	21.98	25.36	89.12	NA	NA	81.67	62.76	60.32	2.84	2.30	NA	NA	Yes
11/16/2021	10.67	17.38	21.48	25.38	88.83	NA	NA	78.52	60.76	58.34	3.19	2.73	NA	NA	Yes
11/17/2021	11.06	17.67	19.68	24.06	88.76	NA	NA	72.61	13.83	11.41	2.52	1.80	NA	NA	Yes
11/18/2021	4.14	9.82	22.86	24.96	86.55	NA	NA	77.36	13.52	11.33	3.84	2.89	29.42	29.68	Yes
11/19/2021	12.63	19.08	22.71	25.31	82.59	NA	NA	79.48	24.22	21.27	3.64	2.48	11.49	11.40	Yes
11/20/2021	11.73	17.99	22.19	25.37	84.64	NA	NA	78.02	14.65	11.38	3.69	2.53	14.19	13.65	Yes
11/21/2021	11.61	17.83	20.97	24.68	86.28	NA	NA	76.07	15.19	11.53	3.79	2.41	15.90	15.21	Yes
11/22/2021	11.56	17.65	21.17	24.20	86.37	NA	NA	75.63	15.47	11.81	3.88	2.49	16.87	16.19	Yes
11/23/2021	11.32	17.95	20.65	23.49	79.14	NA	NA	74.27	17.79	13.38	3.58	2.04	21.64	20.84	Yes
11/24/2021	10.58	17.64	21.01	23.92	80.18	NA	NA	71.20	46.54	41.72	3.88	2.16	17.89	16.84	Yes
11/25/2021	10.27	16.84	20.69	24.34	81.85	NA	NA	69.53	54.40	49.40	3.93	2.20	18.50	17.45	Yes
11/26/2021	8.71	15.09	20.84	24.46	82.54	NA	NA	69.75	54.38	49.39	3.83	2.20	20.89	19.96	Yes
11/27/2021	9.49	15.90	20.78	24.45	82.31	NA	NA	69.87	54.48	49.62	3.86	2.28	23.48	22.46	Yes
11/28/2021	10.61	17.16	20.78	24.69	82.45	NA	NA	70.26	54.87	49.81	3.93	2.20	24.57	23.47	Yes
11/29/2021	10.76	17.55	20.89	24.65	84.25	NA	NA	70.50	54.33	49.73	6.12	4.46	25.87	24.48	Yes
11/30/2021	10.51	17.51	21.03	24.46	83.59	NA	NA	72.11	54.56	49.97	NA	NA	35.08	33.63	Yes

Notes:

All measurements in elevation above mean sea level.

NA or NM = Not measured or otherwise not available

No data were available for the following dates/wells:

R-01 Redevelopment November 2 - 7, 2021

R-08 Redevelopment November 8 - 17, 2021

O-03 Redevelopment November 10 - 30, 2021

R-07 Redevelopment November 30 - December 6, 2021

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 6. December 2021 Daily Average Gradients

Date	R-01		R-02		R-03		R-04	R-05	R-06		R-07		R-08		All Gradients <1 foot?
	O-01	O-07	O-01	O-02	O-02	O-03	O-03	O-04	O-04	O-05	O-05	O-06	O-06	O-07	
12/1/2021	9.94	16.64	17.30	20.80	82.83	NA	NA	63.04	48.69	43.99	NA	NA	21.26	20.06	Yes
12/2/2021	11.49	17.95	19.46	22.90	84.28	78.65	72.63	65.53	37.65	33.22	NA	NA	17.42	16.35	Yes
12/3/2021	9.92	17.34	20.53	24.33	82.52	77.10	70.38	66.09	24.56	19.71	NA	NA	14.44	13.11	Yes
12/4/2021	9.90	17.32	20.84	24.61	82.87	77.38	71.34	66.96	36.76	32.05	NA	NA	12.13	10.83	Yes
12/5/2021	9.78	16.93	20.93	24.76	80.95	75.74	70.05	67.47	48.16	43.10	NA	NA	23.56	22.26	Yes
12/6/2021	9.37	15.66	20.44	23.78	83.45	77.76	72.12	66.42	51.86	46.98	NA	NA	27.59	26.78	Yes
12/7/2021	10.70	16.23	28.01	30.19	91.30	82.57	80.46	85.14	55.29	51.17	3.17	2.72	21.90	21.80	Yes
12/8/2021	NA	17.42	NA	36.18	88.81	70.51	73.10	99.60	69.65	65.84	24.47	21.06	24.12	25.37	Yes
12/9/2021	NA	20.48	NA	39.34	81.33	63.81	68.14	104.42	76.60	71.92	5.27	4.58	29.36	28.97	Yes
12/10/2021	NA	19.02	NA	39.27	79.82	63.96	69.29	91.15	73.09	68.26	5.40	4.59	29.37	28.94	Yes
12/11/2021	NA	20.24	NA	39.41	80.40	63.04	68.27	98.24	74.98	70.15	5.45	4.64	29.75	28.98	Yes
12/12/2021	NA	19.73	NA	39.58	80.00	63.49	69.20	105.70	75.93	71.08	5.56	4.72	28.82	27.88	Yes
12/13/2021	NA	19.13	NA	38.97	80.86	64.94	69.25	100.90	75.03	70.15	5.47	4.65	24.66	23.40	Yes
12/14/2021	NA	14.09	NA	40.00	81.65	64.63	70.98	106.68	77.13	72.39	5.46	4.83	25.75	25.49	Yes
12/15/2021	NA	17.01	NA	41.10	81.56	71.45	78.18	107.31	78.03	73.07	5.66	4.83	21.28	20.70	Yes
12/16/2021	NA	16.53	NA	39.03	81.65	73.55	79.51	102.87	75.27	70.34	5.48	4.62	22.34	21.84	Yes
12/17/2021	10.17	17.21	38.77	40.46	80.99	64.05	72.47	105.13	75.99	71.26	5.43	4.70	27.71	27.30	Yes
12/18/2021	9.40	16.13	39.48	40.41	80.28	62.71	71.69	105.72	76.26	71.52	5.43	4.72	21.85	21.59	Yes
12/19/2021	7.03	13.46	39.71	40.69	81.39	63.27	72.50	105.71	76.21	71.59	5.37	4.78	18.72	18.55	Yes
12/20/2021	8.12	15.46	38.21	42.25	81.37	62.87	71.49	105.61	77.53	72.51	5.76	4.86	26.71	26.82	Yes
12/21/2021	7.96	16.85	39.99	NA	NA	58.41	67.06	112.68	77.47	72.03	6.31	4.91	24.03	24.61	Yes
12/22/2021	6.82	15.66	36.98	NA	NA	56.55	66.01	114.91	74.96	69.66	6.04	4.77	17.56	18.31	Yes
12/23/2021	6.83	15.43	37.63	NA	NA	57.77	67.44	114.65	74.85	69.61	6.11	4.80	5.99	6.85	Yes
12/24/2021	3.95	12.32	42.28	43.59	74.83	58.44	68.33	114.51	74.69	69.44	6.00	4.75	15.32	16.08	Yes
12/25/2021	5.42	13.80	40.54	41.70	74.78	58.73	68.84	114.40	74.80	69.54	6.04	4.71	18.31	18.98	Yes
12/26/2021	6.92	15.27	37.14	38.39	74.47	58.65	69.05	114.29	74.83	69.49	6.04	4.68	16.22	16.60	Yes
12/27/2021	6.91	15.22	37.26	38.63	74.69	58.72	69.26	114.19	74.78	69.45	5.91	4.53	13.71	14.10	Yes
12/28/2021	6.72	14.51	37.06	38.81	77.40	69.69	75.04	112.47	74.44	69.03	5.69	4.35	9.98	10.35	Yes
12/29/2021	7.25	14.86	37.01	38.66	78.16	69.28	76.04	112.19	74.21	68.85	5.42	4.09	13.62	13.89	Yes
12/30/2021	6.95	14.92	37.26	38.48	76.52	76.90	85.59	112.32	73.61	69.23	5.32	4.04	16.18	16.49	Yes
12/31/2021	6.01	13.95	38.30	39.42	74.85	76.31	86.41	113.60	74.27	68.94	5.68	4.33	13.81	13.92	Yes

Notes:

All measurements in elevation above mean sea level.

NA or NM = Not measured or otherwise not available

No data were available for the following dates/wells:

O-03 Redevelopment December 1, 2021

R-07 Redevelopment November 30 - December 6, 2021

O-01 Redevelopment December 8 - December 16, 2021

O-02 Redevelopment December 21 - 23, 2021

Hydraulic Gradient - Daily Average Water Level Elevations - Observation and Recovery Wells

Figure 1 i. Hydraulic Gradient for Wells Paired with R-01

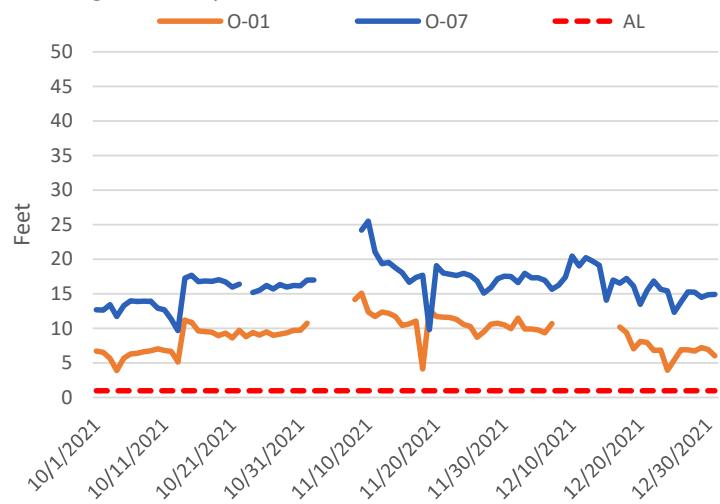


Figure 1j. Hydraulic Gradient for Wells Paired with R-02

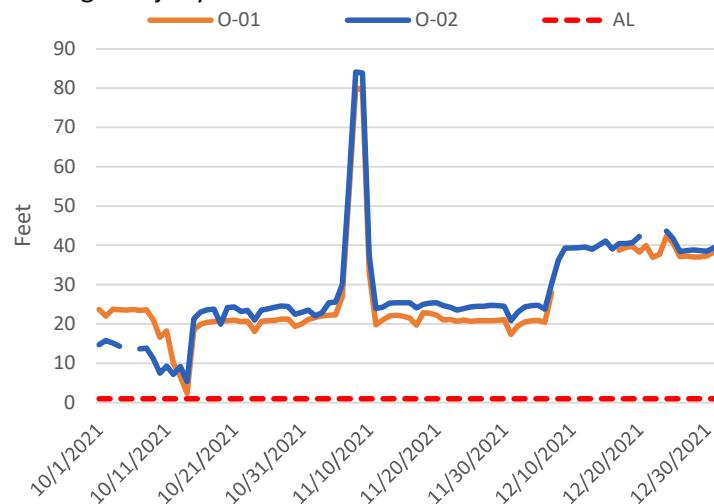


Figure 1k. Hydraulic Gradient for Wells Paired with R-03

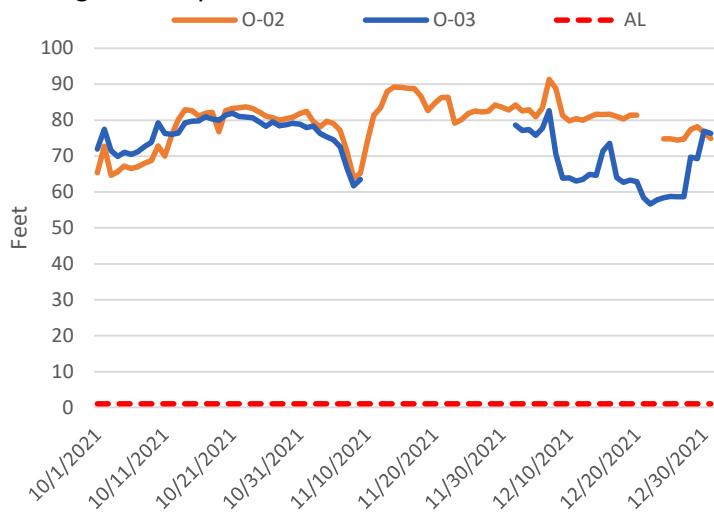
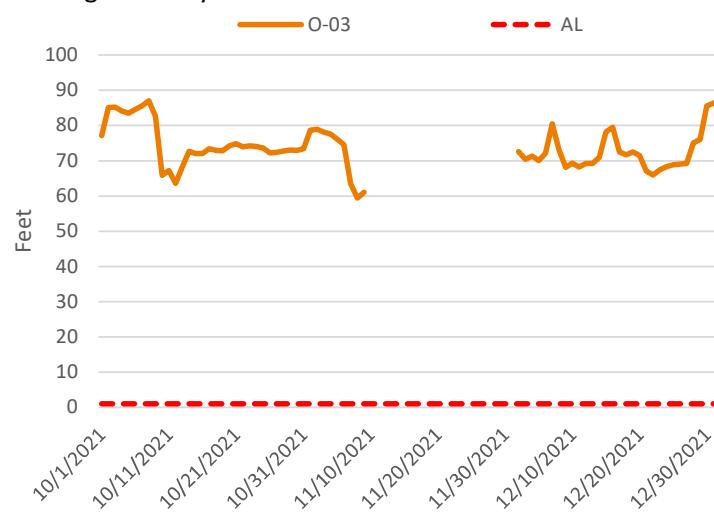


Figure 1l. Hydraulic Gradient for Wells Paired with R-04



Notes:

Refer to preceding Daily Hydraulic Gradient for Recovery Well Pairings Tables (Tables 4 - 6) for details on missing data points.

Hydraulic Gradient - Daily Average Water Level Elevations - Observation and Recovery Wells

Figure 1m. Hydraulic Gradient for Wells Paired with R-05

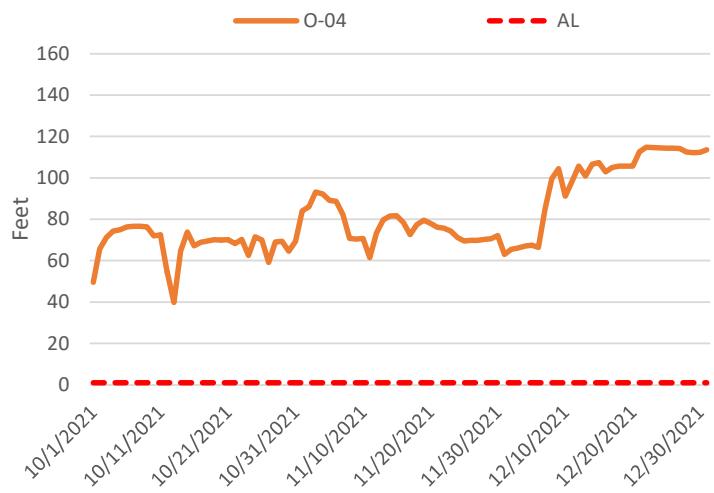


Figure 1n. Hydraulic Gradient for Wells Paired with R-06

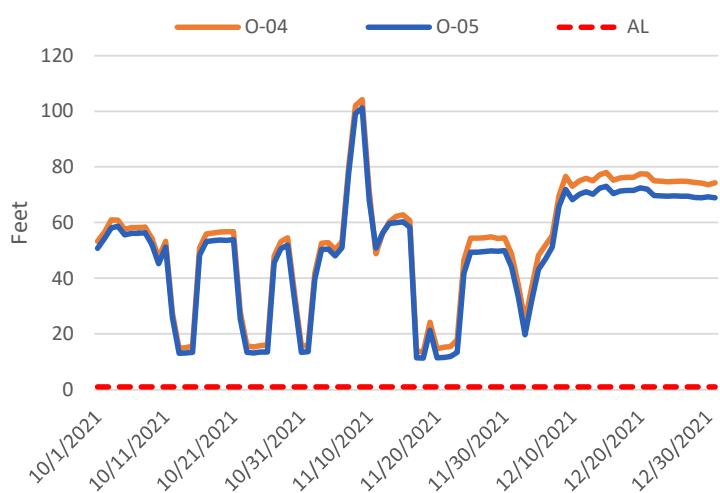


Figure 1o. Hydraulic Gradient for Wells Paired with R-07

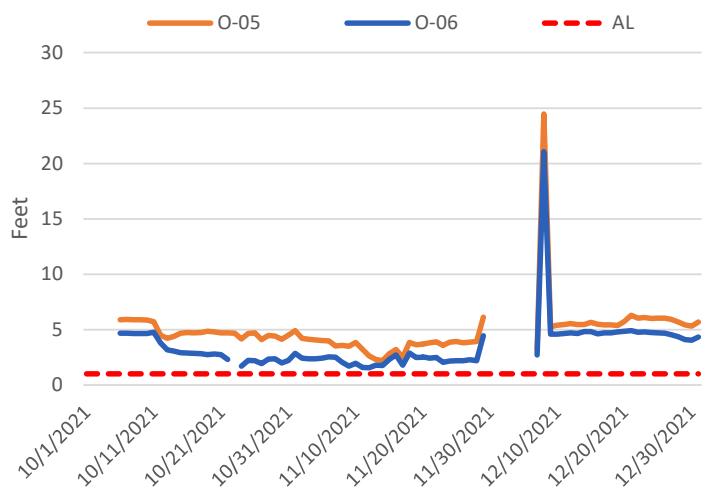
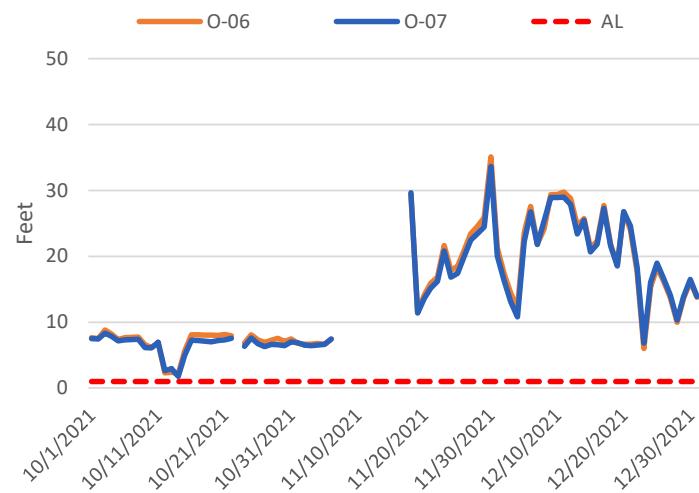


Figure 1p. Hydraulic Gradient for Wells Paired with R-08



Notes:

Refer to preceding Daily Hydraulic Gradient for Recovery Well Pairings Tables (Tables 4 - 6) for details on missing data points.

ATTACHMENT 4

Table and Graphs of Fluid Electrical Conductivity Measurements

INJECTION AND OBSERVATION WELLS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 1. October 2021 Daily Fluid Electrical Conductivity - Injection and Observation Wells

Date	I-01	I-02 ¹	I-03	I-04	O-01	O-02	O-03	O-04	O-05	O-06	O-07
10/1/2021	638	4356	729	NA	NA	3459	3435	1550	2082	1553	1533
10/2/2021	899	4355	870	617	5487	3695	4188	1592	2101	1591	1539
10/3/2021	2355	1940	830	720	5550	3356	4182	1568	2115	1614	1566
10/4/2021	5207	584	523	2636	5350	3326	4310	1537	2029	1536	1512
10/5/2021	536	4456	NA	543	5330	3381	3606	1529	1988	1516	1499
10/6/2021	536	4456	NA	543	NA						
10/7/2021	451	5345	NA	491	5857	3621	4260	1676	2171	1704	1670
10/8/2021	480	4923	NA	477	NA	3340	4541	1576	2007	1628	1602
10/9/2021	4531	5012	NA	4302	5354	3327	3816	1535	1957	1549	1547
10/10/2021	456	4913	NA	456	NA	3488	4805	1540	1951	1536	1510
10/11/2021	615	NA	NA	688	5645	3340	3372	1518	2003	1552	1525
10/12/2021	3703	NA	NA	3718	5510	3488	4473	1542	1983	1569	1566
10/13/2021	1725	NA	NA	NA	5242	NA	4655	1507	NA	1543	1519
10/14/2021	NA	NA	NA	NA	5385	3350	4586	1497	1922	1573	1520
10/15/2021	NA	NA	NA	NA	NA	NA	4735	1532	1973	1733	1661
10/16/2021	NA	NA	692	690	5221	3114	1888	1496	1873	1537	1505
10/17/2021	NA	NA	785	429	5261	3207	4910	1517	2011	NA	1557
10/18/2021	NA	NA	419	401	4829	2309	4743	1490	1922	1485	1467
10/19/2021	NA	NA	487	427	5430	2415	4216	1623	2114	1655	1624
10/20/2021	NA	NA	457	429	5479	2516	5055	1645	2115	1648	1647
10/21/2021	NA	NA	611	574	5787	2662	5225	1635	2078	1680	1642
10/22/2021	NA	NA	NA	NA	5724	2652	5274	1655	2122	1668	NA
10/23/2021	NA	NA	NA	NA	5759	2627	5177	1663	2084	NA	NA
10/24/2021	NA	NA	NA	NA	5699	2734	5365	1641	2075	NA	NA
10/25/2021	NA	NA	NA	NA	5750	2630	5369	1594	2019	1639	1609
10/26/2021	NA	NA	NA	NA	5344	2808	5262	1518	1951	1545	1586
10/27/2021	NA	NA	NA	NA	5273	NA	3817	1509	1851	1523	1501
10/28/2021	NA	NA	1075	425	5029	NA	5032	1510	1856	1550	1523
10/29/2021	NA	NA	594	NA	5100	NA	5144	1515	1908	1560	1520
10/30/2021	NA	NA	NA	NA	4857	NA	5139	1515	1881	1526	1518
10/31/2021	NA	NA	NA	NA	5061	NA	4654	1586	2096	1548	1634

Notes:

All measurements in microsiemens per centimeter ($\mu\text{S}/\text{cm}$)

#N/A or NM = Not measured or otherwise not available

(1) 10/1 - 10/11/2021 I-02 was operated as a recovery well

No data were available for the following dates/wells:

Injection flows were adjusted as part of rinsing program in October, with selected wells operated on different days as part of the wellfield rinsing plan.

10/1/2021 O-01 pump replacement

10/6/2021 No observation well conductivity field sheet submitted

10/8 & 10/10/2021 O-01 pump malfunction

10/13/2021 O-02, O-05 pump malfunction

10/14 - 10/15/2021 All injection suspended for reverse osmosis system maintenance

10/15/2021 O-01 field measurement error

10/15/2021 O-02 pump malfunction

10/17/2021 O-06 Field measurement error

10/22 - 10/24/2021 O-06 and O-07 pump and transducer pulled for logging test

10/23 - 10/25/2021 All injection suspended for reverse osmosis system maintenance

10/27 - 11/8/2021 O-02 redevelopment

INJECTION AND OBSERVATION WELLS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 2. November 2021 Daily Fluid Electrical Conductivity - Injection and Observation Wells

Date	I-01	I-02	I-03	I-04	O-01	O-02	O-03	O-04	O-05	O-06	O-07
11/1/2021	NA	NA	NA	NA	4898	NA	4823	1521	1834	1565	1532
11/2/2021	NA	NA	561	497	5593	NA	4977	1650	1817	1542	1605
11/3/2021	NA	NA	518	497	5072	NA	3072	1448	1853	1495	1411
11/4/2021	NA	NA	1237	432	5263	NA	4636	1478	1838	1507	1405
11/5/2021	NA	NA	544	476	4873	NA	4846	1459	1779	1475	1460
11/6/2021	NA	NA	620	507	4873	NA	4677	1461	1769	1480	1480
11/7/2021	NA	NA	747	646	4870	NA	4638	1483	1789	1498	1495
11/8/2021	NA	NA	587	472	5221	2258	4797	NA	1870	1541	1532
11/9/2021	NA	NA	660	640	4688	2319	2082	NA	1843	1561	1552
11/10/2021	NA	NA	664	637	4669	2111	NA	NA	1794	1493	1476
11/11/2021	NA	NA	457	425	5063	2318	NA	NA	1861	1548	1538
11/12/2021	NA	NA	567	554	4896	2215	NA	1582	1824	1553	1543
11/13/2021	NA	NA	388	395	5017	2930	NA	NA	1913	1547	1520
11/14/2021	NA	NA	485	465	5712	2318	NA	NA	1851	1469	1572
11/15/2021	NA	NA	456	450	5296	2132	NA	NA	1886	1494	1433
11/16/2021	NA	NA	481	487	5364	2375	NA	NA	1948	1598	1565
11/17/2021	NA	NA	419	433	5430	1952	NA	NA	1989	1611	1570
11/18/2021	NA	NA	545	480	4326	1957	NA	NA	1640	1458	1422
11/19/2021	NA	NA	442	399	5420	2328	NA	NA	1870	1607	1645
11/20/2021	NA	NA	1224	397	4994	2168	NA	1525	1763	1559	1538
11/21/2021	NA	NA	478	426	4937	2173	NA	1528	1751	1551	1513
11/22/2021	NA	NA	478	426	5454	2428	NA	1664	1921	1669	1647
11/23/2021	NA	NA	596	513	5172	2196	NA	1557	1813	1594	1573
11/24/2021	NA	NA	746	703	5535	2445	NA	1659	1920	1679	1640
11/25/2021	NA	NA	696	662	5749	2342	NA	NA	1985	1684	1653
11/26/2021	NA	NA	916	901	5811	2220	NA	1547	1944	1570	1560
11/27/2021	NA	NA	510	490	5700	2038	NA	1693	1822	1624	1570
11/28/2021	NA	NA	507	480	5645	2340	NA	1679	1900	1703	1639
11/29/2021	NA	NA	494	487	5051	2238	NA	1596	1846	1677	1663
11/30/2021	NA	NA	596	579	5236	2293	NA	1641	1903	1681	1666

Notes:All measurements in microsiemens per centimeter ($\mu\text{S}/\text{cm}$)

#N/A or NM = Not measured or otherwise not available

11/20/2021 I-03 outlier, possible field recording error

No data were available for the following dates/wells:

No injection at I-01 and I-02 in November as per rinsing plan

11/1/2021 No injection as part of rinsing plan

10/27 - 11/8/2021 O-02 redevelopment

11/8 - 11/11/2021 O-04 redevelopment

11/10 - 12/2/2021 O-03 redevelopment

11/13 - 11/19/2021 O-04 pump maintenance

11/25/2021 O-04 pump maintenance

INJECTION AND OBSERVATION WELLS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 3. December 2021 Daily Fluid Electrical Conductivity - Injection and Observation Wells

Date	I-01	I-02	I-03	I-04	R-09	O-01	O-02	O-03	O-04	O-05	O-06	O-07
12/1/2021	NA	NA	2066	2020	NA	5167	2250	NA	1669	1876	1671	1660
12/2/2021	NA	NA	2407	2302	NA	5133	2304	NA	1648	1850	1663	1642
12/3/2021	NA	NA	NA	NA	NA	5489	2275	3209	1687	1884	1652	1608
12/4/2021	NA	NA	NA	NA	NA	5507	2304	3103	1660	1882	1701	1637
12/5/2021	NA	NA	NA	NA	NA	5007	2162	1656	1434	1712	1552	1513
12/6/2021	NA	NA	NA	NA	NA	4371	1991	1480	1398	1561	1484	1464
12/7/2021	893	NA	NA	744	NA	4823	2112	4610	1730	1930	1619	1640
12/8/2021	526	NA	NA	508	NA	4677	2126	4705	1807	1972	1636	1627
12/9/2021	NA	NA	NA	NA	818	NA	2166	5340	1527	1745	1542	1571
12/10/2021	NA	NA	NA	NA	575	NA	2907	5182	1514	1742	1681	1611
12/11/2021	NA	NA	NA	NA	682	NA	1942	4945	1608	1756	1562	1518
12/12/2021	NA	NA	NA	NA	745	NA	1969	5177	1567	1737	1530	1527
12/13/2021	NA	NA	NA	NA	515	NA	1960	4606	1603	1770	1591	1594
12/14/2021	NA	NA	NA	NA	591	NA	2220	5229	1609	1812	1627	1610
12/15/2021	NA	NA	NA	NA	702	NA	2299	5201	1618	1837	1599	1586
12/16/2021	NA	NA	NA	NA	744	NA	2043	2602	1610	1782	1630	1556
12/17/2021	NA	NA	NA	NA	533	NA	2123	1769	1568	1785	1618	1129
12/18/2021	NA	NA	NA	NA	1143	NA	1680	4925	1612	1795	1635	1572
12/19/2021	NA	NA	NA	NA	514	NA	1802	4662	1454	1625	1504	1500
12/20/2021	NA	NA	NA	NA	1050	NA	NA	5860	1713	1902	1902	1782
12/21/2021	NA	NA	NA	NA	685	4985	NA	5072	1713	1786	1610	1425
12/22/2021	NA	NA	NA	NA	547	4296	NA	4482	1476	1620	1490	1464
12/23/2021	NA	NA	NA	NA	744	4606	1680	4925	1612	1795	1635	1572
12/24/2021	NA	NA	NA	NA	714	5300	1505	1745	1655	1775	1657	1739
12/25/2021	NA	NA	NA	NA	1138	4600	1346	4993	1728	1620	1682	1582
12/26/2021	NA	NA	NA	NA	866	4418	1357	4883	1572	1770	1580	1542
12/27/2021	NA	NA	NA	NA	1342	4190	1316	4512	1486	1605	1496	1509
12/28/2021	NA	NA	NA	NA	834	4170	1362	4580	1511	1626	1520	1497
12/29/2021	NA	NA	NA	NA	1304	4243	1783	NA	1463	1641	1529	1494
12/30/2021	NA	NA	NA	NA	948	4141	1496	NA	1487	1634	1502	1492
12/31/2021	NA	NA	NA	NA	985	4667	1428	4841	1630	1766	1620	1585

Notes:All measurements in microsiemens per centimeter ($\mu\text{S}/\text{cm}$)

#N/A or NM = Not measured or otherwise not available

12/1 - 12/2/2021 I-02 and I-03 outliers, potential field recording issue

No data were available for the following dates/wells:

12/1 - 12/2/2021: Injection at I-03 and I-04 only

12/3 - 12/6/2021: No injection per rinsing plan

12/7 - 12/8/2021: Injection at I-01 and I-04 only

12/8/2021 I-02 and I-03 converted to recovery wells; recovery well R-09 converted to injection well

12/8/2021 I-01 and I-04 are converted to recovery wells but are not operated until 12/20/2021

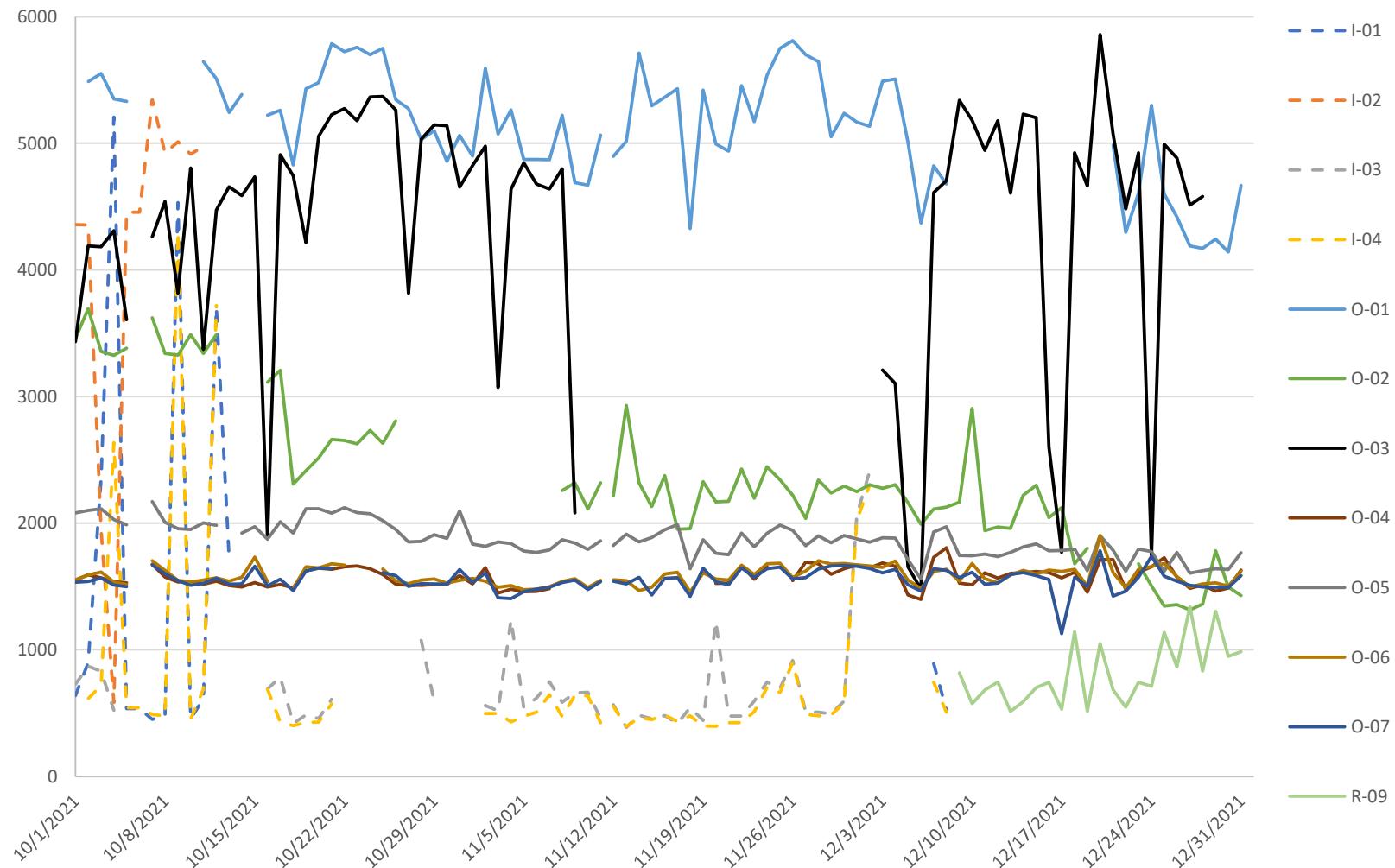
12/8 - 12/20/2021 O-01 redevelopment

12/20/2021 I-01 and I-04 begin operation as recovery wells

12/20 - 12/22/2021 O-02 redevelopment

12/29 - 12/30/2021 O-03 pump malfunction

Figure 1. Daily Fluid Electrical Conductivity in Injection & Observation Wells



ATTACHMENT 5

Table and Graphs of Bulk Electrical Conductivity Measurements

MEMORANDUM

28 January 2022
File No. 133887-012

TO: Florence Copper Inc.
Mr. Brent Berg, General Manager

C: Florence Copper Inc.
Mr. Ian Ream, Senior Hydrogeologist

FROM: Haley & Aldrich, Inc.
Laura Menken, R.G.

SUBJECT: Summary of Bulk Electrical Conductivity Monitoring Results
Fourth Quarter 2021
Production Test Facility
Florence Copper Inc.
Florence, Arizona



Haley & Aldrich, Inc. (Haley & Aldrich) has conducted statistical analysis of bulk electrical conductivity (EC) data collected by HydroGeophysics, Inc. at the Florence Copper Inc. (Florence Copper) Production Test Facility (PTF) located in Florence, Arizona, in accordance with Underground Injection Control (UIC) Permit No. R9UIC-AZ3-FR11-1. The procedures used to complete the analysis were described in the document titled *Procedures for Determining Bulk Electrical Conductivity Alert Levels* (Haley & Aldrich, 2018).¹

Alert levels (AL) for bulk EC were initially approved in the letter issued by the U.S. Environmental Protection Agency (USEPA) dated 14 December 2018. On 27 February 2020, Florence Copper submitted a request to revise bulk EC ALs to the USEPA. The proposed ALs were adopted in the now-retired Temporary Aquifer Protection Permit (Temporary APP) No. P-106360 on 13 February 2020. The bulk EC ALs remained unchanged in subsequent amendments of the Temporary APP until its retirement on 14 December 2020.

¹ Haley & Aldrich, Inc., 2018. *Procedures for Determining Bulk Electrical Conductivity Alert Levels, Production Test Facility, Florence Copper Project*. August.

Alert Levels

To ensure that in-situ copper recovery fluids do not enter the Lower Basin Fill Unit (LBFU) from the Bedrock Oxide Unit, the three upper horizons (1 through 3) are monitored. The following ALs are established for these horizons:

Electrode Pair Horizon	Alert Level (ohm-meters)
Horizon 1	9.67
Horizon 2	9.89
Horizon 3	10.07

The ALs represent minimum values. Consequently, an exceedance is indicated if the measured apparent resistivity on one of these horizons is *lower* than the established AL on three adjacent or intersecting current paths.

Fourth Quarter 2021 Monitoring Results

Fourth quarter (Q4) 2021 includes 13 monitoring events for bulk EC between 6 October and 30 December 2021. Monitoring events were conducted on a weekly basis. No bulk EC AL exceedances occurred during the Q4 2021 monitoring period. Bulk EC monitoring maps for the monitoring period detail these results (Figures 1 through 13).

Data Summary

Tables 1 through 3 list the apparent resistivity results over this monitoring period for horizons 1 through 3, respectively.

Relative to the baseline dataset, no outliers were detected on these monitoring dates (defined as values over 4 times the interquartile range outside the range around the data median). As shown by the box plots presented in Attachment A and Tables 1 through 3, the grouped data from each horizon fall within or slightly below the range of the baseline dataset.

Attachment B shows the data from each horizon over time, during the baseline period, and monitoring both before and after the PTF became operational. The data collected during Q4 2021 is within the established tolerance limits.

Enclosures:

Table 1: Bulk Electrical Conductivity Monitoring Results, Horizon 1 (40 Feet Above LBFU/Oxide Contact)

Table 2: Bulk Electrical Conductivity Monitoring Results, Horizon 2 (20 Feet Above LBFU/Oxide Contact)

Table 3: Bulk Electrical Conductivity Monitoring Results, Horizon 3 (at LBFU/Oxide Contact)

Figure 1: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 10/6/2021

Figure 2: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 10/14/2021

Figure 3: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 10/21/2021

Figure 4: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 10/29/2021

Figure 5: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 11/2/2021

Figure 6: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 11/11/2021

Figure 7: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 11/18/2021

Figure 8: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 11/23/2021

Figure 9: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 12/3/2021

Figure 10: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 12/8/2021

Figure 11: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 12/15/2021

Figure 12: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 12/22/2021

Figure 13: Apparent Bulk Resistivity Between Electrode Pairs by Horizon – 12/30/2021

Attachment A: Box Diagrams for Fourth Quarter Monitoring Data

Attachment B: Summary Plot of Bulk Electrical Conductivity

TABLES

TABLE 1**BULK ELECTRICAL CONDUCTIVITY MONITORING RESULTS****HORIZON 1 (40 FEET ABOVE LBFU/OXIDE CONTACT)**

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Electrode 1	Electrode 2	Sending Well	Receiving Well	Apparent Resistivity ($\Omega\text{-m}$)												
				10/6/2021	10/14/2021	10/21/2021	10/29/2021	11/2/2021	11/11/2021	11/18/2021	11/23/2021	12/3/2021	12/8/2021	12/15/2021	12/22/2021	12/30/2021
B-01-BC-01	B-02-BC-01	O-01	O-02	12.54	12.81	12.84	12.85	12.89	12.86	12.89	12.87	12.86	12.89	12.79	12.66	12.79
B-01-BC-01	B-03-BC1-02	O-01	O-03	10.90	11.51	11.49	11.55	11.61	11.57	11.62	11.56	11.60	11.64	11.42	11.44	11.38
B-01-BC-01	B-04-BC-01	O-01	O-04	12.55	13.60	13.61	13.69	13.74	13.72	13.76	13.76	13.72	13.78	13.50	13.54	13.46
B-01-BC-01	B-05-BC-01	O-01	O-05	11.44	12.45	12.47	12.54	12.59	12.60	12.60	12.62	12.53	12.65	12.39	12.43	12.36
B-01-BC-01	B-06-BC-01	O-01	O-06	10.95	11.91	11.92	11.98	12.02	12.03	12.03	12.04	11.95	12.05	11.84	11.88	11.81
B-01-BC-01	B-07-BC1-02	O-01	O-07	11.31	11.94	11.93	11.98	12.02	12.03	12.04	12.03	11.97	12.05	11.90	11.93	11.89
B-02-BC-01	B-03-BC1-02	O-02	O-03	10.11	10.60	10.60	10.64	10.67	10.62	10.68	10.63	10.66	10.69	10.56	10.47	10.50
B-02-BC-01	B-04-BC-01	O-02	O-04	13.05	14.27	14.25	14.32	14.40	14.39	14.38	14.38	14.35	14.43	14.15	14.12	14.05
B-02-BC-01	B-05-BC-01	O-02	O-05	12.36	13.71	13.72	13.81	13.87	13.85	13.87	13.86	13.73	13.89	13.63	13.60	13.53
B-02-BC-01	B-06-BC-01	O-02	O-06	12.28	13.64	13.65	13.73	13.79	13.79	13.78	13.78	13.64	13.82	13.56	13.53	13.47
B-02-BC-01	B-07-BC1-02	O-02	O-07	11.49	12.57	12.57	12.64	12.69	12.66	12.68	12.68	12.59	12.71	12.51	12.44	12.43
B-03-BC1-02	B-04-BC-01	O-03	O-04	11.88	12.81	12.82	12.87	12.91	12.87	12.91	12.88	12.87	12.94	12.74	12.75	12.63
B-03-BC1-02	B-05-BC-01	O-03	O-05	11.96	13.23	13.23	13.30	13.34	13.31	13.34	13.32	13.23	13.39	13.15	13.19	13.04
B-03-BC1-02	B-06-BC-01	O-03	O-06	12.79	14.35	14.39	14.44	14.52	14.43	14.48	14.46	14.35	14.54	14.26	14.30	14.10
B-03-BC1-02	B-07-BC1-02	O-03	O-07	12.18	13.64	13.65	13.72	13.78	13.72	13.75	13.73	13.64	13.82	13.54	13.57	13.41
B-04-BC-01	B-05-BC-01	O-04	O-05	10.50	10.87	10.86	10.90	10.92	10.91	10.93	10.94	10.89	10.93	10.86	10.86	10.80
B-04-BC-01	B-06-BC-01	O-04	O-06	11.62	12.57	12.56	12.62	12.66	12.66	12.66	12.68	12.57	12.71	12.52	12.54	12.40
B-04-BC-01	B-07-BC1-02	O-04	O-07	12.06	13.21	13.22	13.29	13.32	13.34	13.34	13.34	13.22	13.37	13.14	13.19	12.99
B-05-BC-01	B-06-BC-01	O-05	O-06	9.84	10.33	10.34	10.38	10.41	10.39	10.42	10.42	10.38	10.42	10.32	10.34	10.24
B-05-BC-01	B-07-BC1-02	O-05	O-07	10.38	11.13	11.14	11.17	11.24	11.23	11.26	11.24	11.20	11.26	11.09	11.13	10.99
B-06-BC-01	B-07-BC1-02	O-06	O-07	9.85	10.15	10.16	10.17	10.21	10.21	10.23	10.23	10.21	10.21	10.15	10.14	10.09

Notes $\Omega\text{-m}$ = ohm-meters

LBFU = Lower Basin Fill Unit

Oxide = Bedrock Oxide Unit

Horizon 1 Alert Level = 9.67 $\Omega\text{-m}$

TABLE 2**BULK ELECTRICAL CONDUCTIVITY MONITORING RESULTS****HORIZON 2 (20 FEET ABOVE LBFU/OXIDE CONTACT)**

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Electrode 1	Electrode 2	Sending Well	Receiving Well	Apparent Resistivity ($\Omega\text{-m}$)												
				10/6/2021	10/14/2021	10/21/2021	10/29/2021	11/2/2021	11/11/2021	11/18/2021	11/23/2021	12/3/2021	12/8/2021	12/15/2021	12/22/2021	12/30/2021
B-01-BC-02	B-02-BC-02	O-01	O-02	14.24	14.51	14.54	14.54	14.60	14.56	14.60	14.59	14.58	14.59	14.44	14.42	14.47
B-01-BC-02	B-03-BC1-04	O-01	O-03	11.00	11.60	11.59	11.64	11.71	11.66	11.73	11.68	11.66	11.75	11.50	11.55	11.51
B-01-BC-02	B-04-BC-02	O-01	O-04	12.49	13.51	13.52	13.61	13.68	13.67	13.70	13.69	13.63	13.71	13.41	13.47	13.39
B-01-BC-02	B-05-BC-02	O-01	O-05	11.25	12.35	12.34	12.43	12.49	12.49	12.50	12.51	12.43	12.53	12.26	12.32	12.25
B-01-BC-02	B-06-BC-02	O-01	O-06	10.86	11.81	11.80	11.87	11.92	11.92	11.94	11.94	11.85	11.95	11.73	11.77	11.70
B-01-BC-02	B-07-BC1-04	O-01	O-07	11.31	11.93	11.92	11.97	12.01	12.02	12.02	12.02	11.98	12.05	11.87	11.91	11.88
B-02-BC-02	B-03-BC1-04	O-02	O-03	10.77	11.26	11.25	11.31	11.34	11.28	11.36	11.27	11.30	11.37	11.22	11.19	11.18
B-02-BC-02	B-04-BC-02	O-02	O-04	13.16	14.39	14.36	14.44	14.51	14.50	14.51	14.49	14.45	14.57	14.28	14.26	14.19
B-02-BC-02	B-05-BC-02	O-02	O-05	12.43	13.78	13.79	13.88	13.92	13.90	13.94	13.93	13.84	13.96	13.69	13.69	13.60
B-02-BC-02	B-06-BC-02	O-02	O-06	12.33	13.73	13.71	13.79	13.84	13.84	13.85	13.84	13.72	13.89	13.62	13.59	13.55
B-02-BC-02	B-07-BC1-04	O-02	O-07	11.52	12.58	12.60	12.66	12.71	12.70	12.72	12.71	12.65	12.74	12.52	12.51	12.47
B-03-BC1-04	B-04-BC-02	O-03	O-04	11.89	12.81	12.81	12.86	12.91	12.83	12.92	12.85	12.87	12.94	12.74	12.76	12.64
B-03-BC1-04	B-05-BC-02	O-03	O-05	11.86	13.13	13.14	13.19	13.24	13.18	13.25	13.21	13.13	13.30	13.05	13.10	12.94
B-03-BC1-04	B-06-BC-02	O-03	O-06	12.71	14.26	14.30	14.37	14.41	14.31	14.40	14.32	14.26	14.45	14.18	14.20	14.04
B-03-BC1-04	B-07-BC1-04	O-03	O-07	11.98	13.45	13.46	13.52	13.58	13.50	13.56	13.49	13.45	13.62	13.36	13.39	13.23
B-04-BC-02	B-05-BC-02	O-04	O-05	10.83	11.22	11.20	11.24	11.25	11.24	11.27	11.28	11.22	11.27	11.20	11.20	11.14
B-04-BC-02	B-06-BC-02	O-04	O-06	11.60	12.55	12.55	12.61	12.65	12.63	12.65	12.67	12.56	12.70	12.51	12.53	12.39
B-04-BC-02	B-07-BC1-04	O-04	O-07	11.85	13.01	13.02	13.10	13.14	13.12	13.13	13.14	13.02	13.17	12.94	12.96	12.79
B-05-BC-02	B-06-BC-02	O-05	O-06	10.06	10.55	10.55	10.58	10.61	10.61	10.63	10.65	10.60	10.64	10.54	10.54	10.46
B-05-BC-02	B-07-BC1-04	O-05	O-07	10.24	10.96	10.98	11.03	11.07	11.07	11.08	11.09	11.02	11.10	10.93	10.96	10.84
B-06-BC-02	B-07-BC1-04	O-06	O-07	10.61	10.91	10.92	10.94	10.96	10.97	10.98	10.99	10.96	10.98	10.91	10.90	10.86

Notes $\Omega\text{-m}$ = ohm-meters

LBFU = Lower Basin Fill Unit

Oxide = Bedrock Oxide Unit

Horizon 2 Alert Level = 9.89 $\Omega\text{-m}$

TABLE 3

BULK ELECTRICAL CONDUCTIVITY MONITORING RESULTS

HORIZON 3 (AT LBFU/OXIDE CONTACT)

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Electrode 1	Electrode 2	Sending Well	Receiving Well	Apparent Resistivity ($\Omega\text{-m}$)												
				10/6/2021	10/14/2021	10/21/2021	10/29/2021	11/2/2021	11/11/2021	11/18/2021	11/23/2021	12/3/2021	12/8/2021	12/15/2021	12/22/2021	12/30/2021
B-01-BC-03	B-02-BC-03	O-01	O-02	15.11	15.37	15.39	15.40	15.46	15.42	15.45	15.45	15.44	15.46	15.14	15.28	15.35
B-01-BC-03	B-03-BC2-02	O-01	O-03	11.10	11.76	11.75	11.83	11.90	11.39	11.83	11.45	11.84	11.93	11.61	11.70	11.61
B-01-BC-03	B-04-BC-03	O-01	O-04	12.42	13.45	13.46	13.55	13.65	13.61	13.66	13.63	13.54	13.66	13.31	13.40	13.32
B-01-BC-03	B-05-BC-03	O-01	O-05	11.18	12.26	12.28	12.35	12.46	12.43	12.44	12.43	12.38	12.47	12.14	12.24	12.18
B-01-BC-03	B-06-BC-03	O-01	O-06	10.73	11.66	11.67	11.75	11.80	11.79	11.81	11.81	11.73	11.83	11.54	11.63	11.60
B-01-BC-03	B-07-BC2-02	O-01	O-07	11.58	12.17	12.18	12.24	12.27	12.27	12.27	12.27	12.23	12.31	12.04	12.17	12.16
B-02-BC-03	B-03-BC2-02	O-02	O-03	10.84	11.34	11.34	11.36	11.44	11.03	11.72	11.22	11.37	11.47	11.28	11.22	11.54
B-02-BC-03	B-04-BC-03	O-02	O-04	13.03	14.27	14.22	14.33	14.39	14.37	14.40	14.37	14.27	14.45	14.14	14.13	14.06
B-02-BC-03	B-05-BC-03	O-02	O-05	12.27	13.65	13.66	13.76	13.81	13.79	13.82	13.79	13.73	13.84	13.57	13.56	13.50
B-02-BC-03	B-06-BC-03	O-02	O-06	12.21	13.59	13.57	13.68	13.73	13.73	13.74	13.71	13.59	13.78	13.50	13.48	13.43
B-02-BC-03	B-07-BC2-02	O-02	O-07	11.63	12.68	12.70	12.76	12.81	12.79	12.82	12.79	12.72	12.84	12.62	12.60	12.57
B-03-BC2-02	B-04-BC-03	O-03	O-04	11.84	12.77	12.78	12.84	12.87	12.35	12.88	12.27	12.80	12.92	12.71	12.73	12.60
B-03-BC2-02	B-05-BC-03	O-03	O-05	12.06	13.34	13.35	13.41	13.45	12.79	13.25	12.68	13.35	13.50	13.26	13.32	12.93
B-03-BC2-02	B-06-BC-03	O-03	O-06	13.10	14.67	14.67	14.76	14.81	13.95	14.44	13.83	14.67	14.85	14.58	14.60	14.05
B-03-BC2-02	B-07-BC2-02	O-03	O-07	12.30	13.75	13.75	13.83	13.89	13.09	13.55	12.87	13.77	13.93	13.67	13.68	13.21
B-04-BC-03	B-05-BC-03	O-04	O-05	11.53	11.90	11.89	11.92	11.96	11.94	11.98	11.98	11.93	11.97	11.91	11.91	11.85
B-04-BC-03	B-06-BC-03	O-04	O-06	11.72	12.65	12.64	12.72	12.76	12.76	12.77	12.80	12.67	12.81	12.61	12.65	12.51
B-04-BC-03	B-07-BC2-02	O-04	O-07	11.76	12.89	12.89	12.98	13.03	13.02	13.04	13.03	12.92	13.07	12.82	12.87	12.69
B-05-BC-03	B-06-BC-03	O-05	O-06	10.32	10.81	10.82	10.86	10.89	10.88	10.90	10.92	10.86	10.91	10.81	10.83	10.74
B-05-BC-03	B-07-BC2-02	O-05	O-07	10.10	10.82	10.84	10.88	10.93	10.94	10.94	10.95	10.87	10.98	10.79	10.84	10.70
B-06-BC-03	B-07-BC2-02	O-06	O-07	10.83	11.11	11.13	11.17	11.19	11.18	11.21	11.21	11.17	11.20	11.13	11.13	11.08

Notes

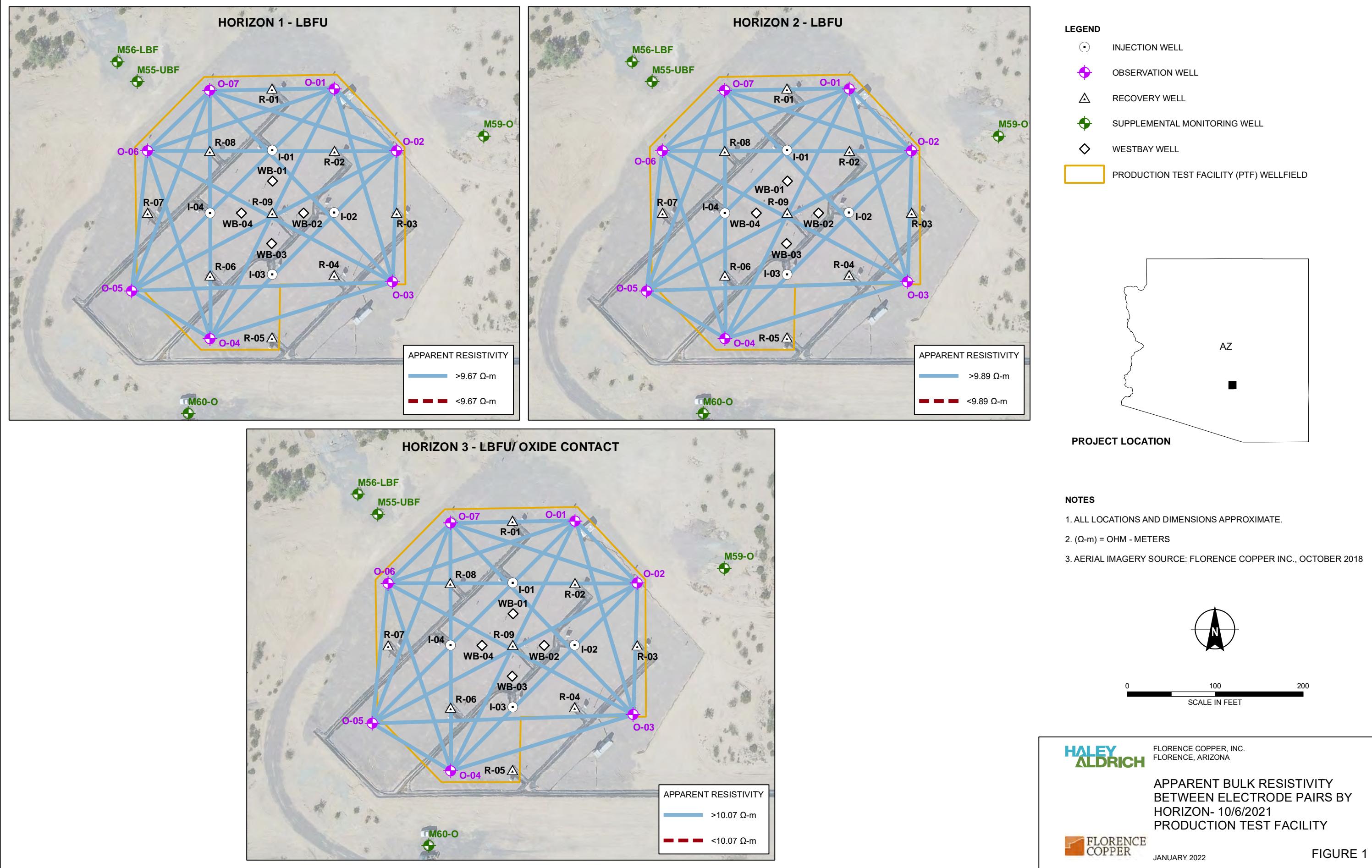
 $\Omega\text{-m}$ = ohm-meters

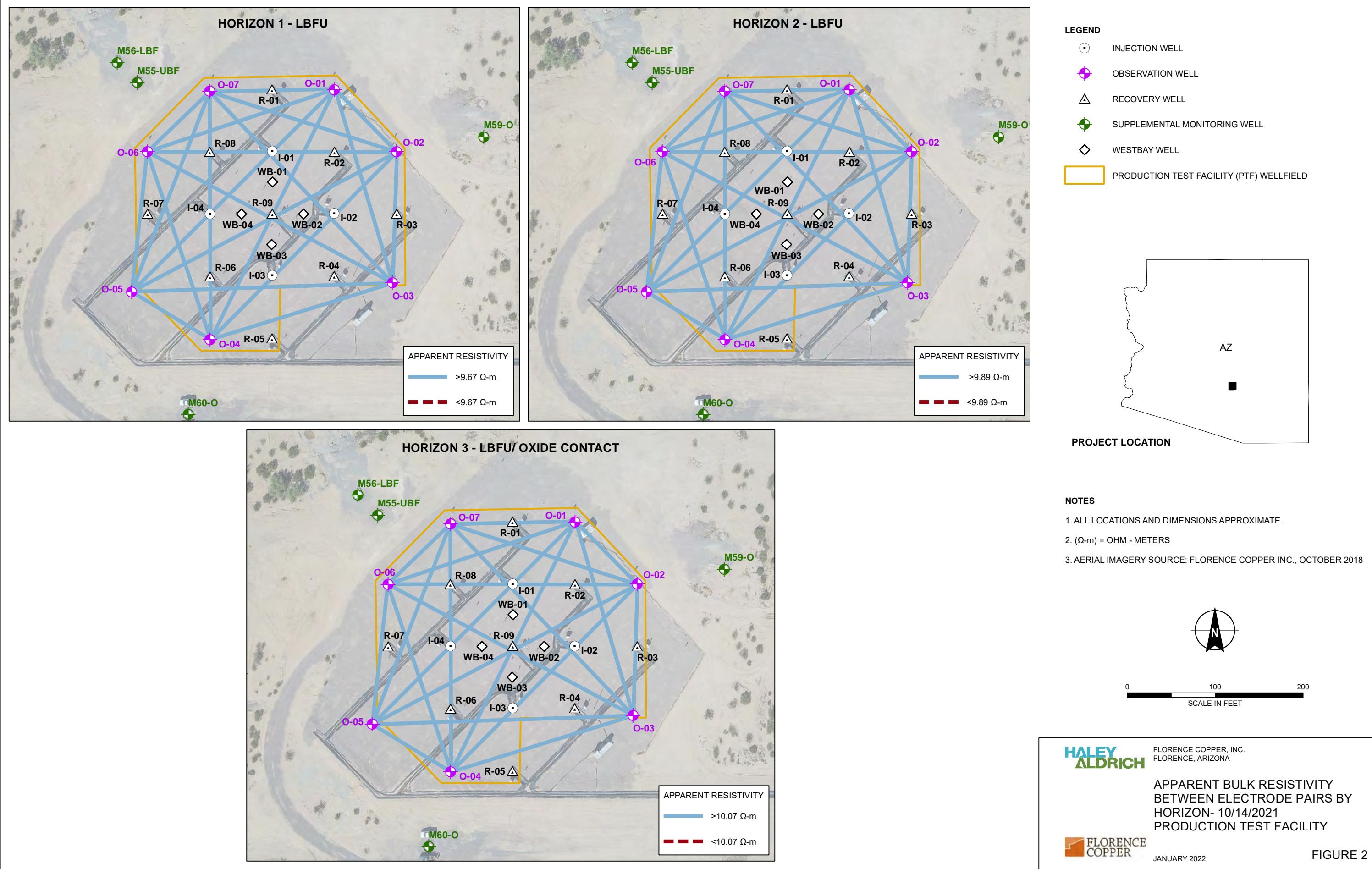
LBFU = Lower Basin Fill Unit

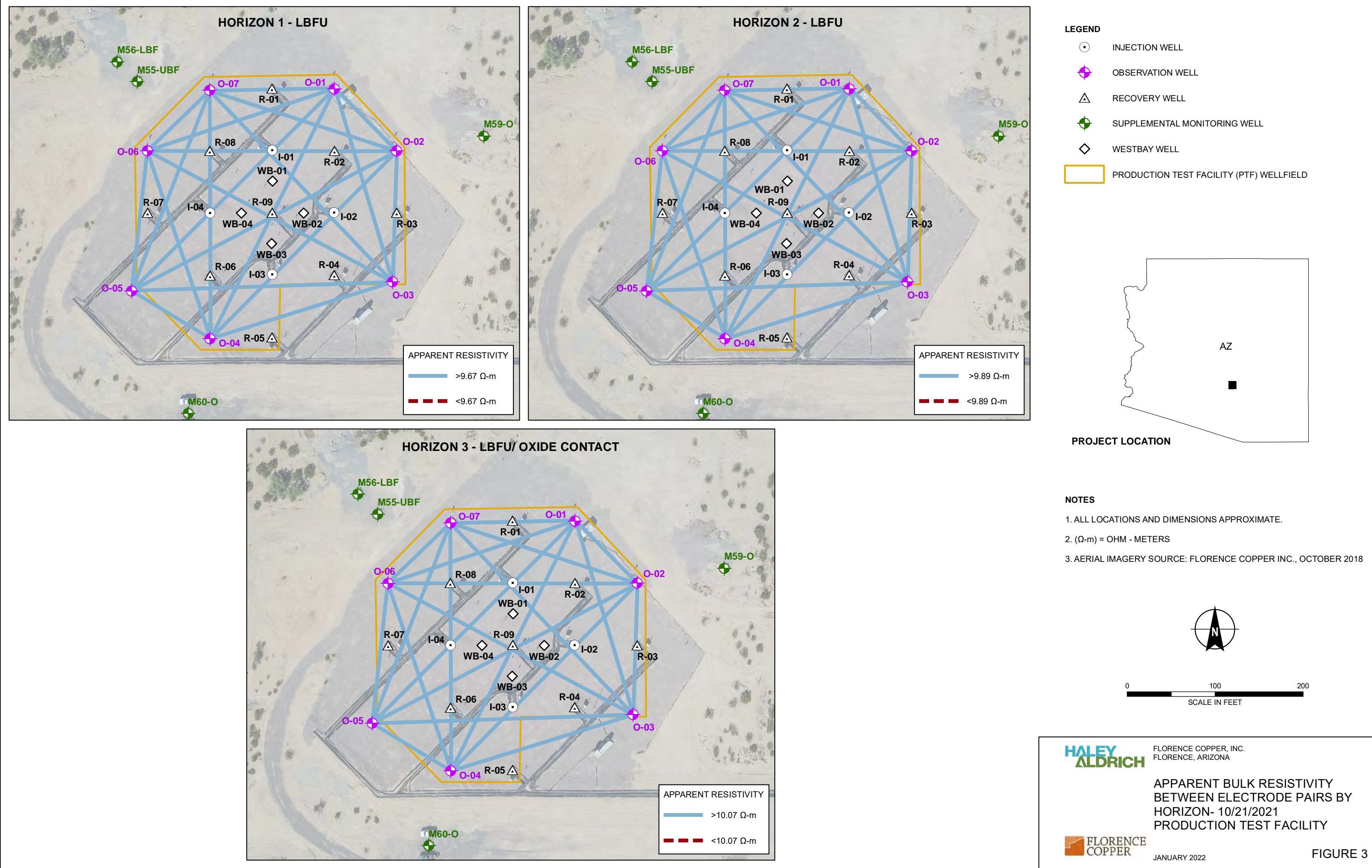
Oxide = Bedrock Oxide Unit

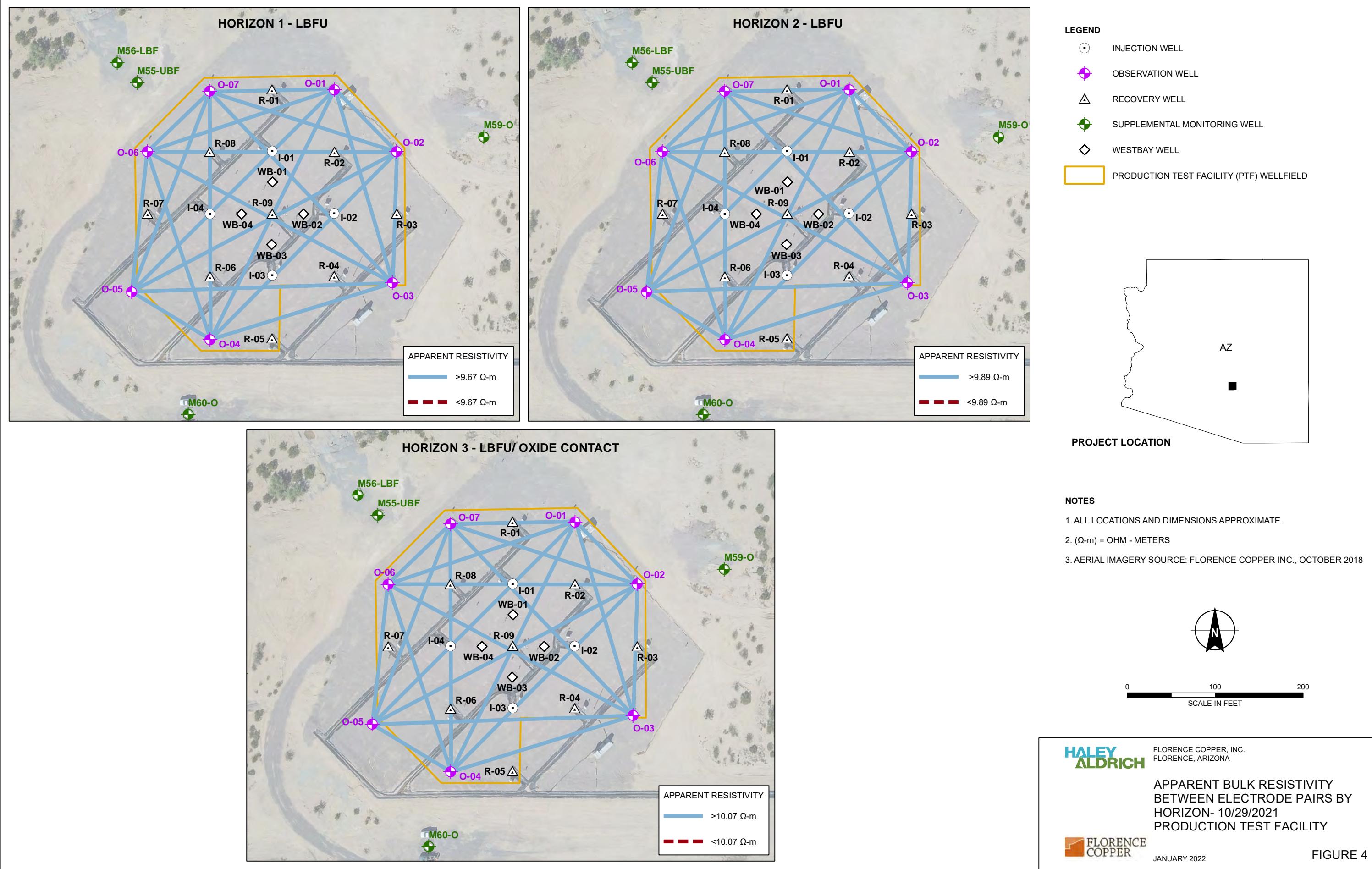
Horizon 3 Alert Level = 10.07 $\Omega\text{-m}$

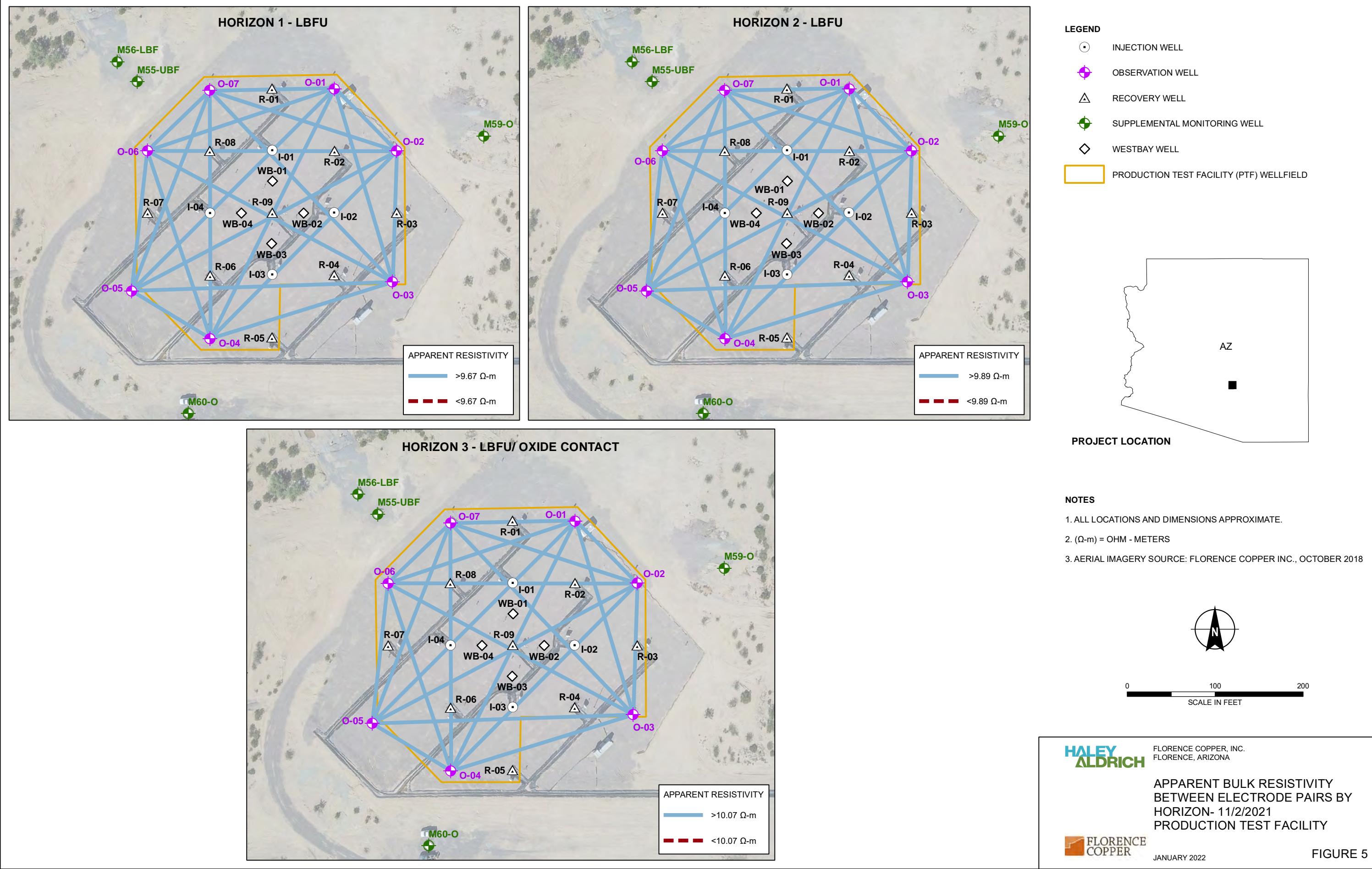
FIGURES

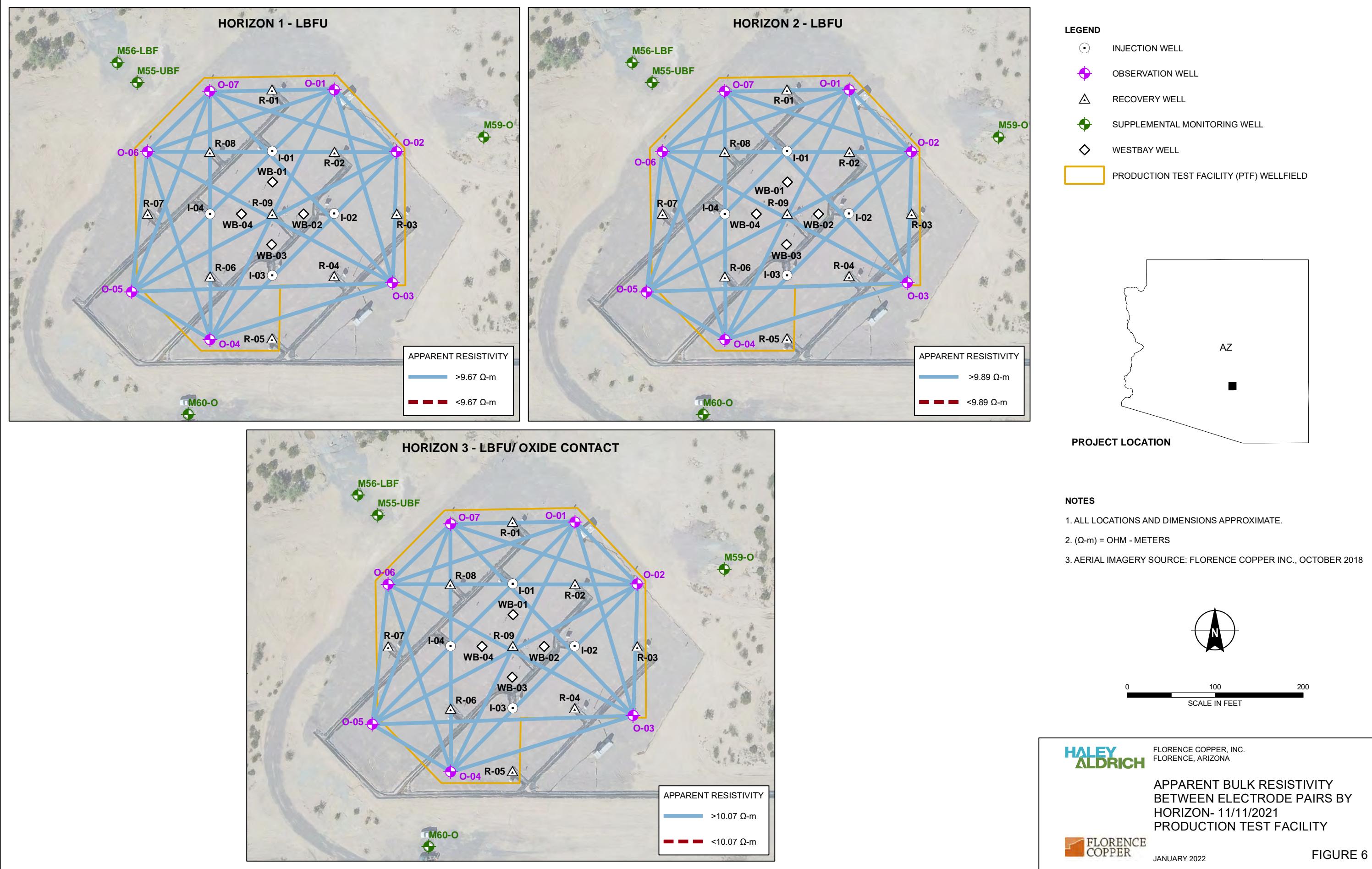


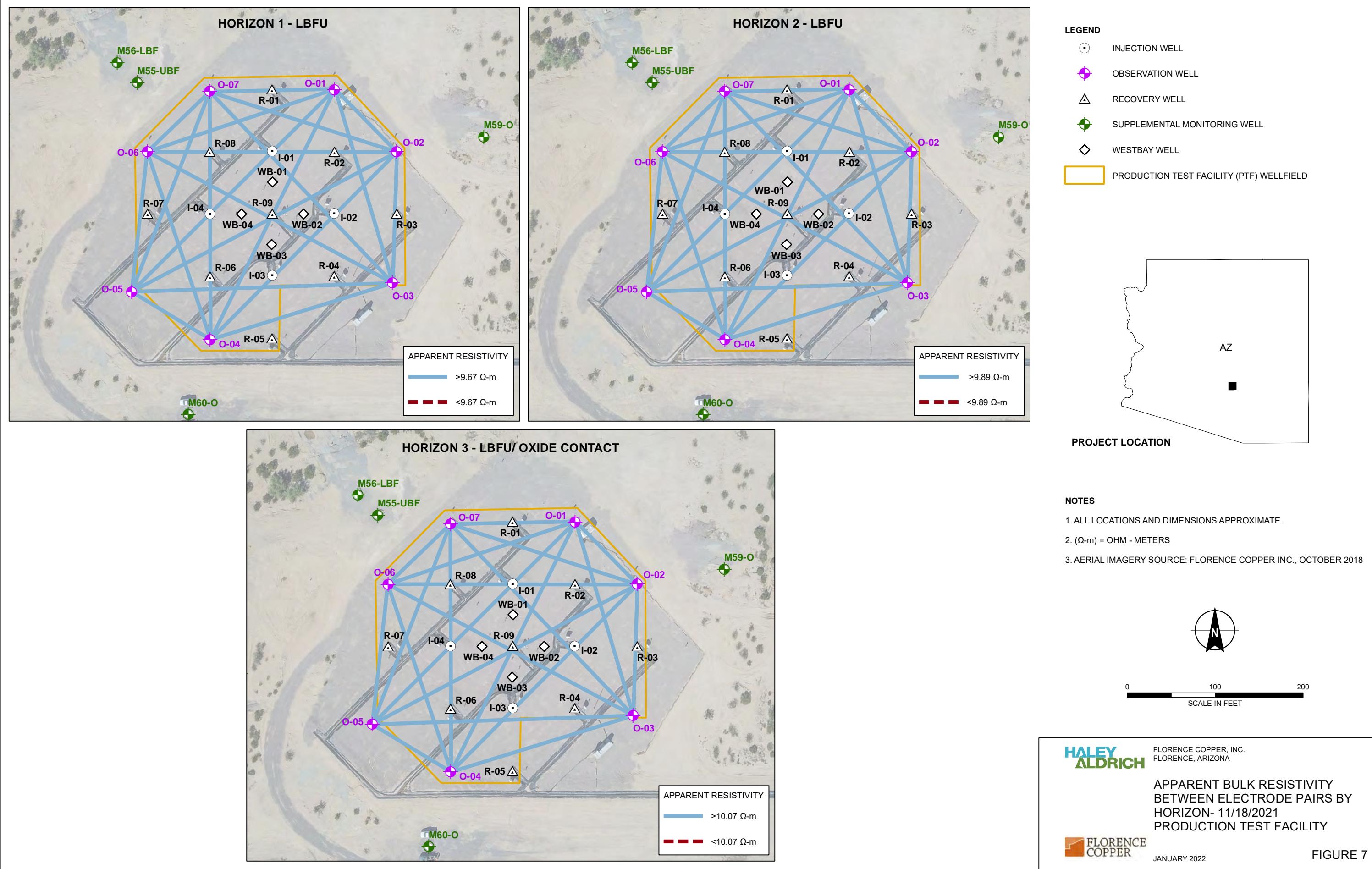


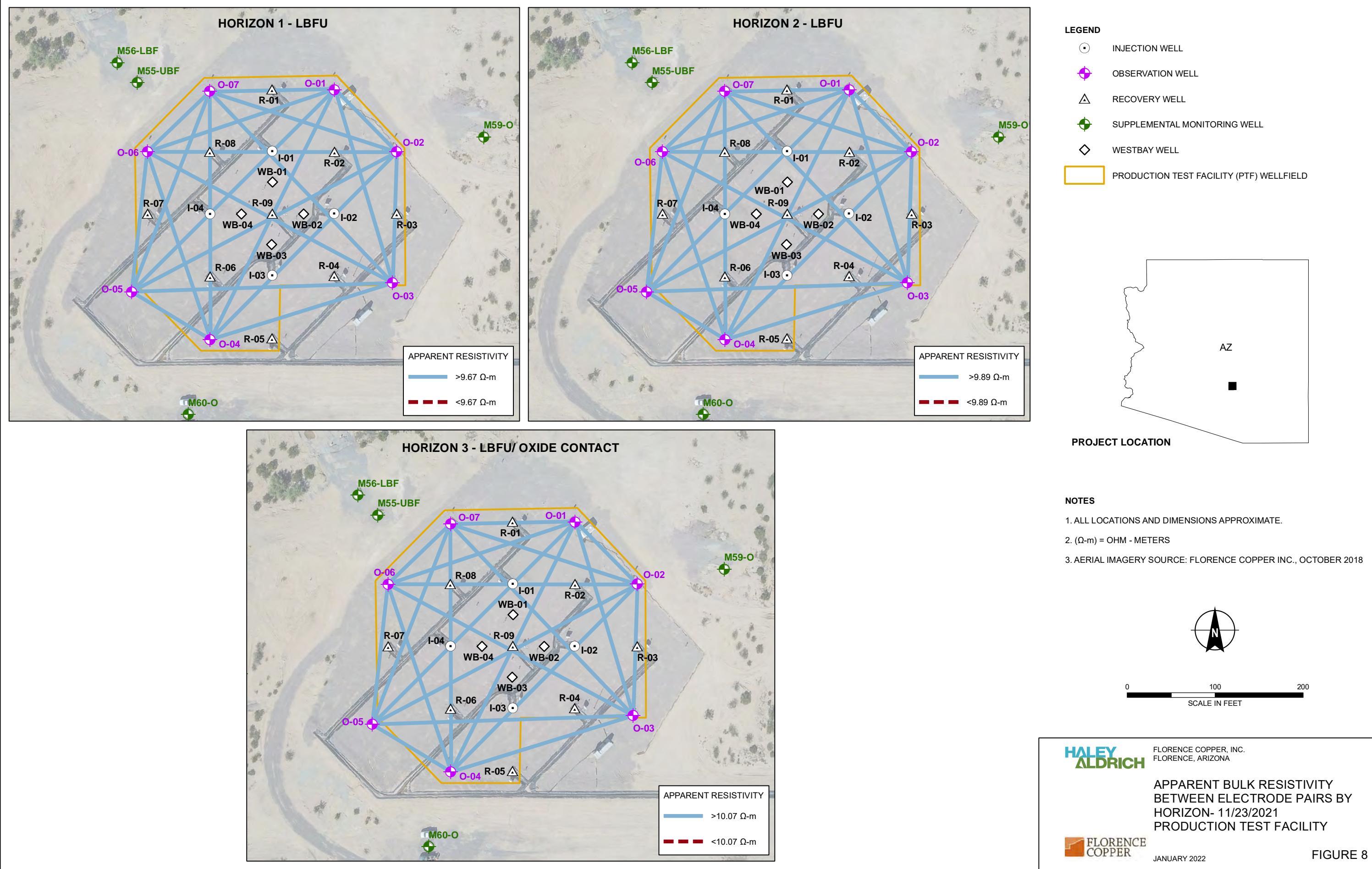


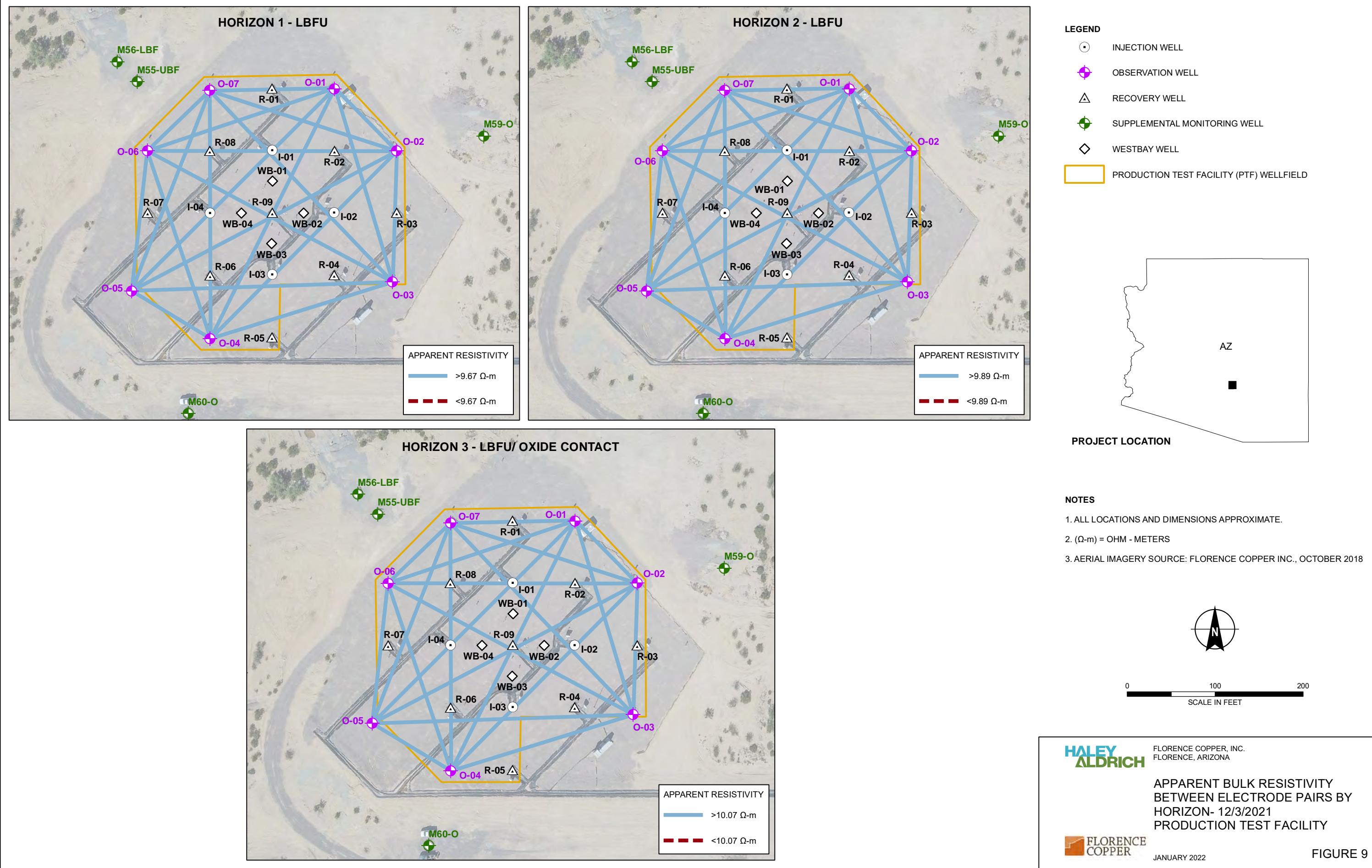


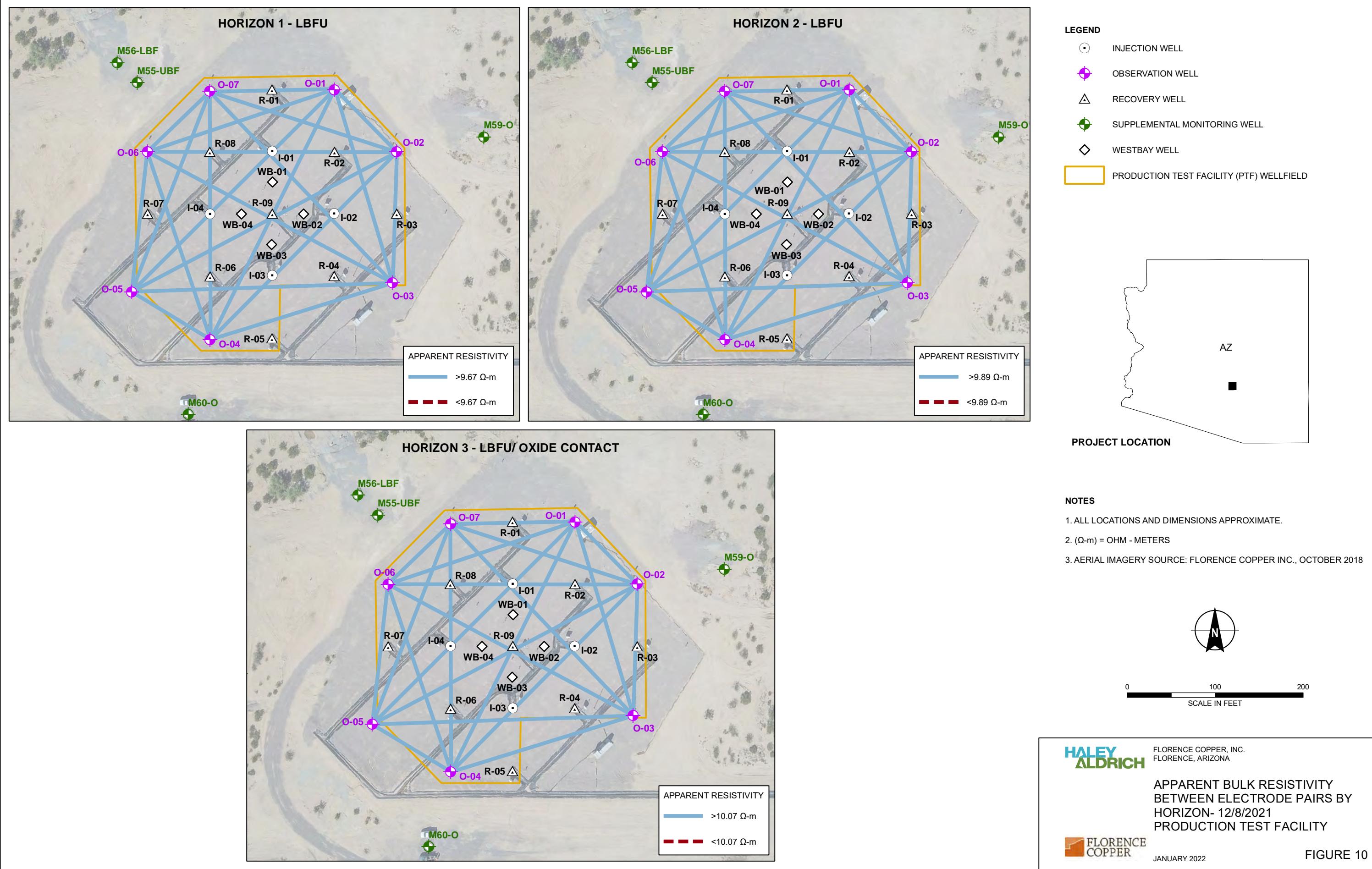


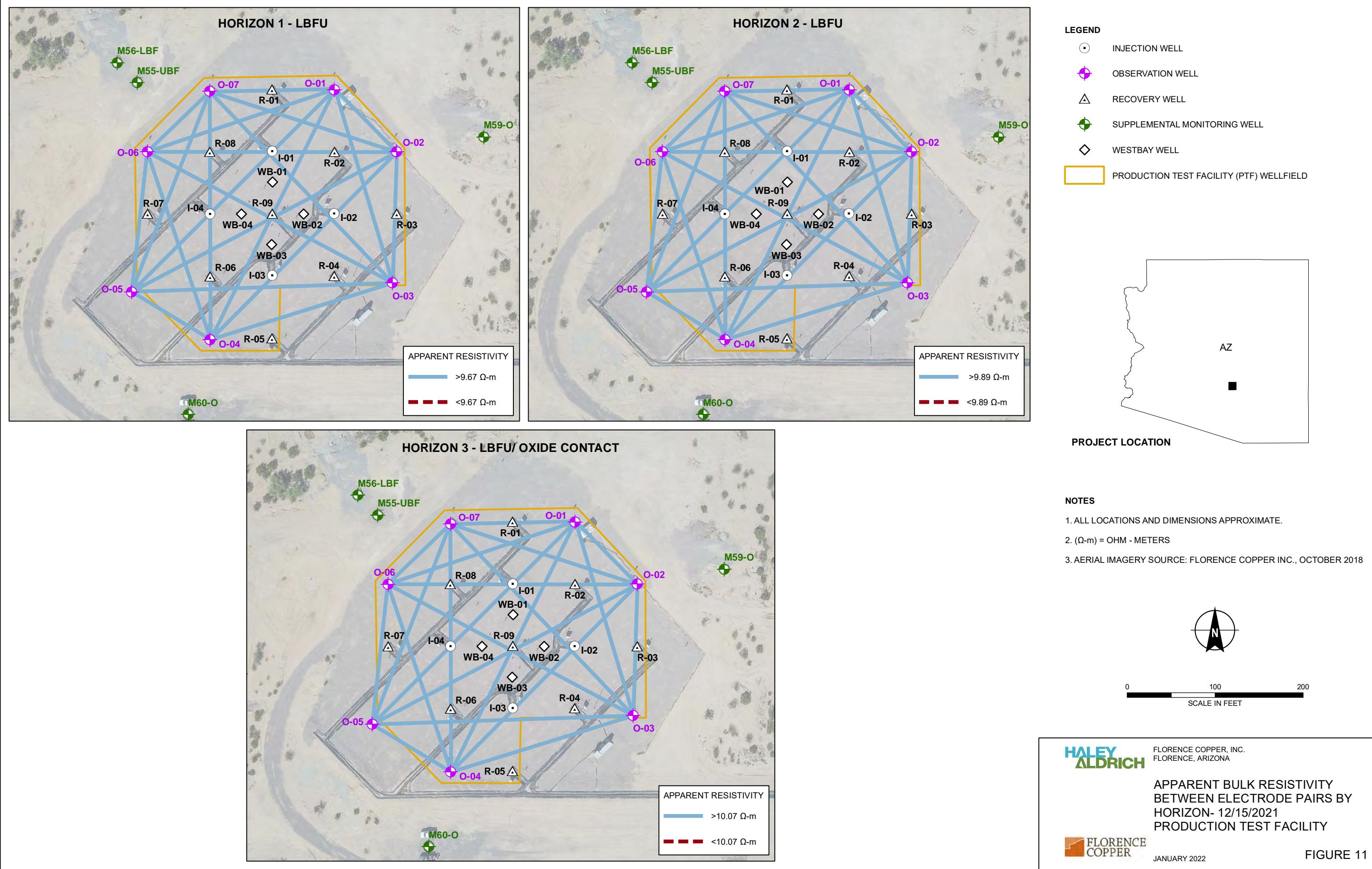


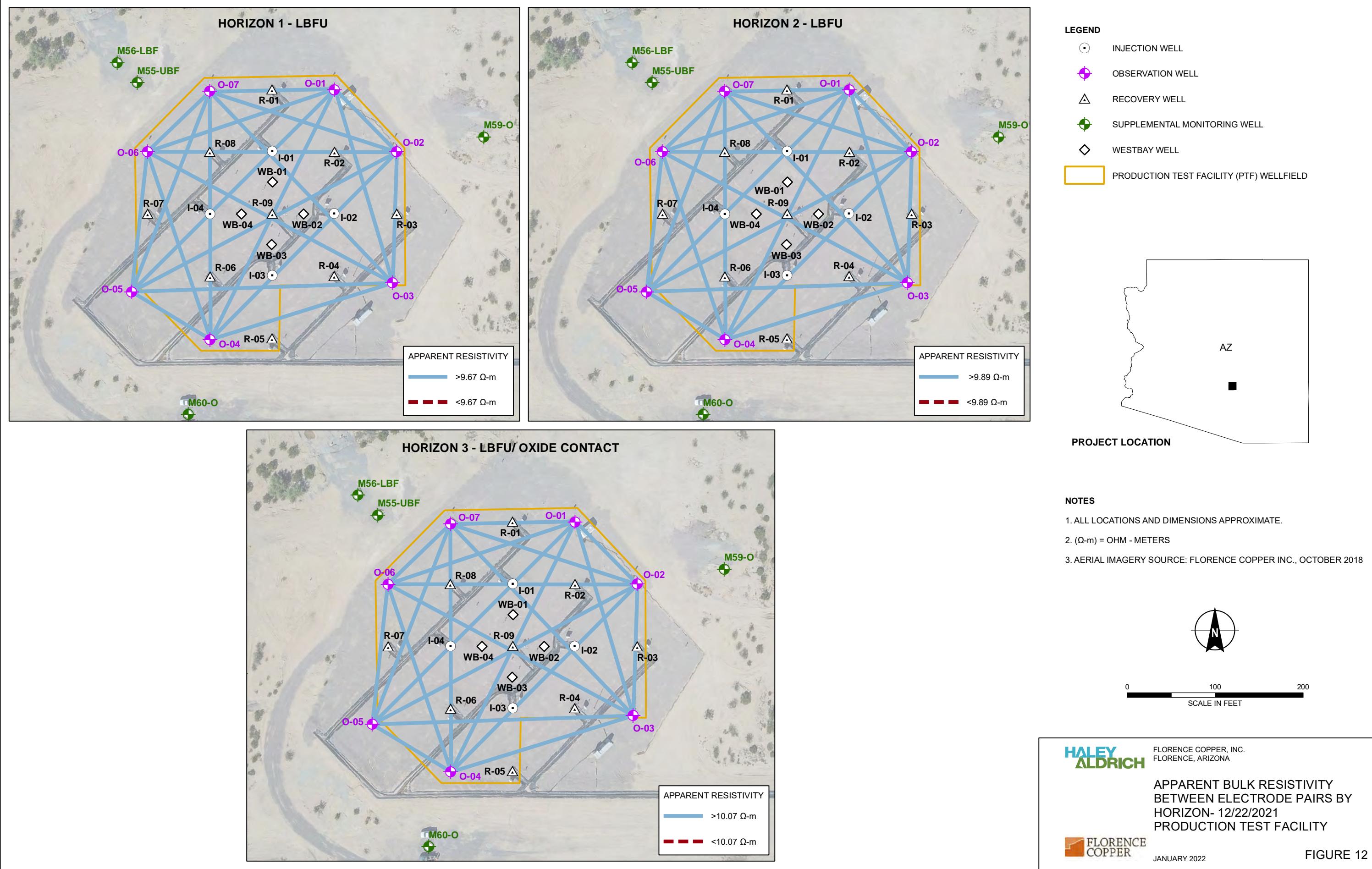


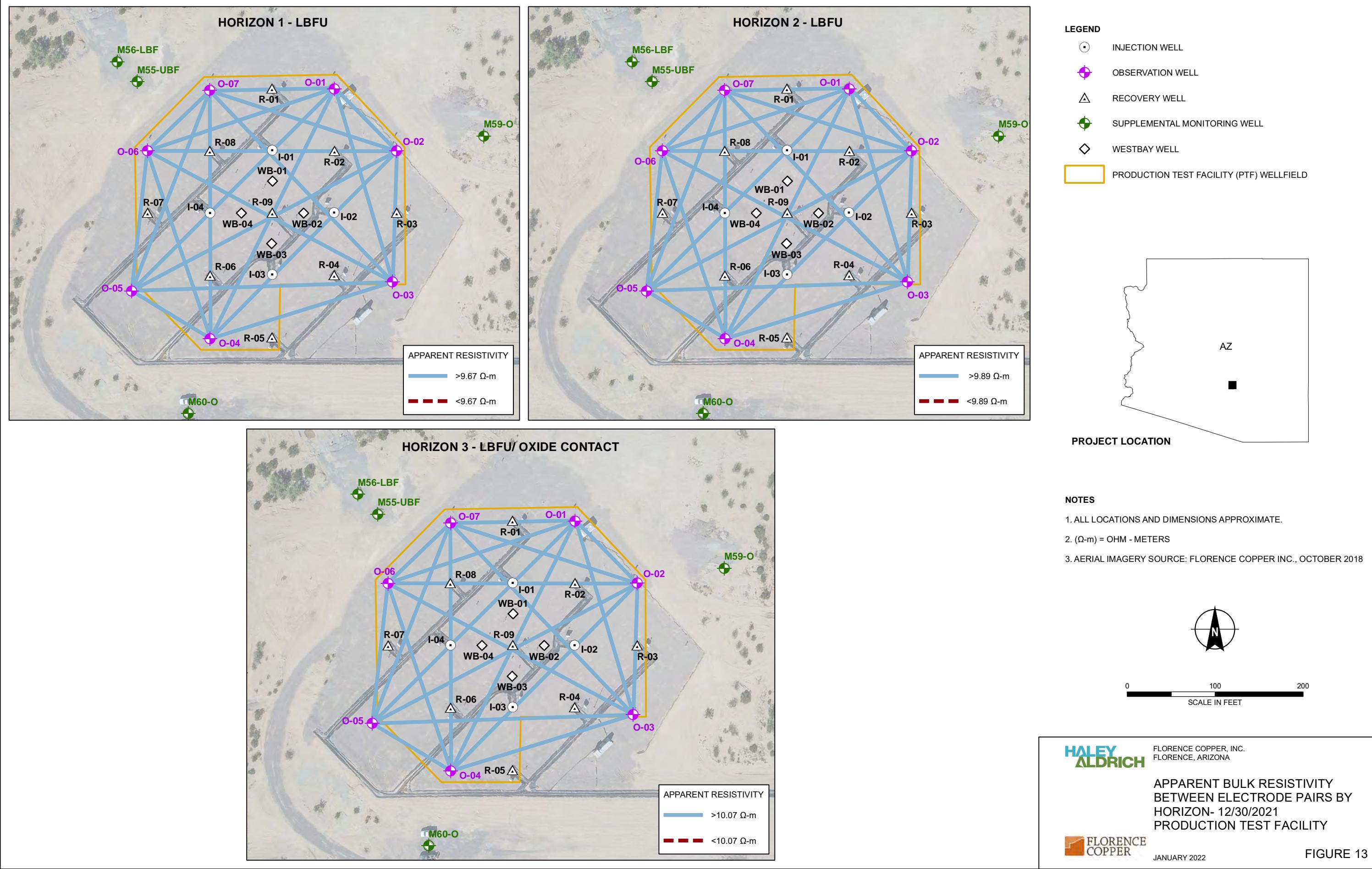










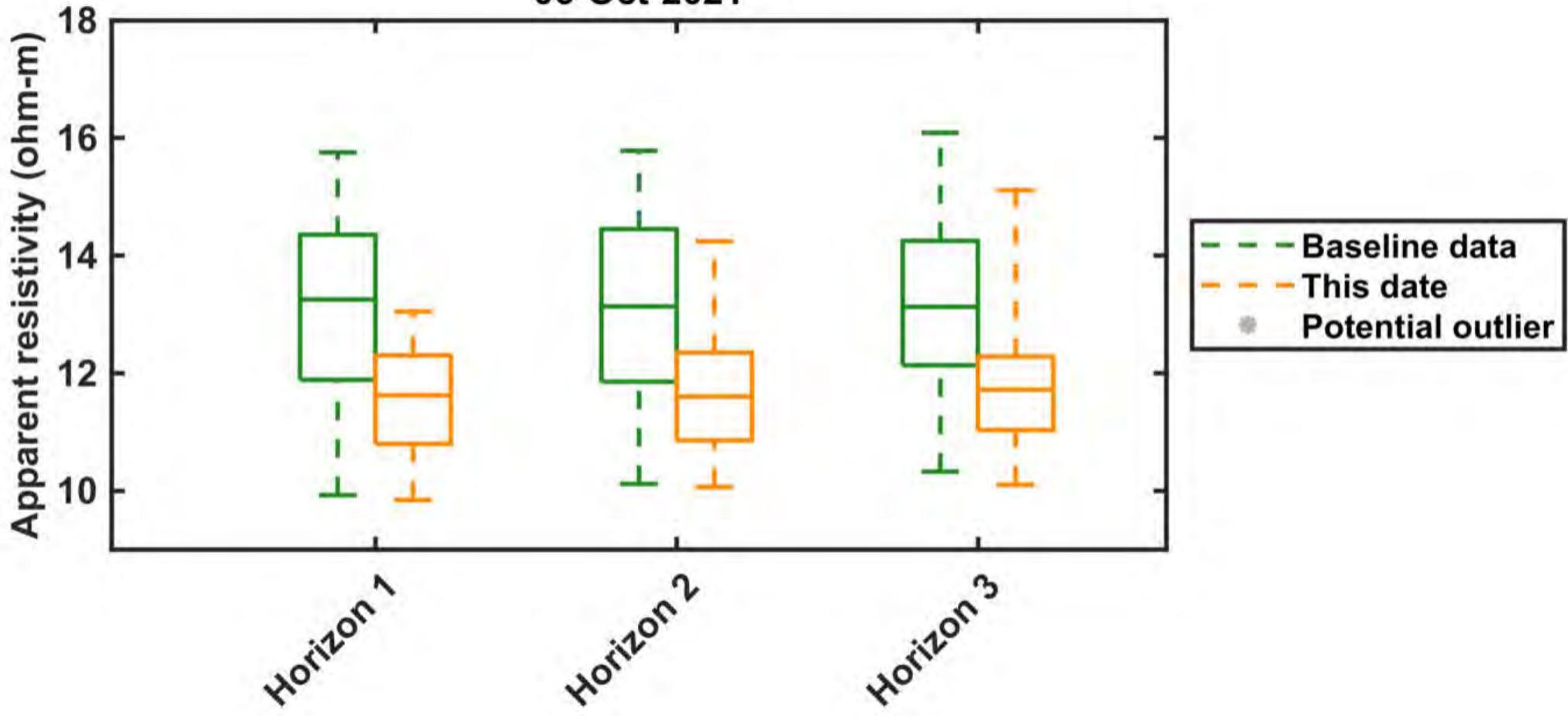


ATTACHMENT A

Box Diagrams for Fourth Quarter Monitoring Data

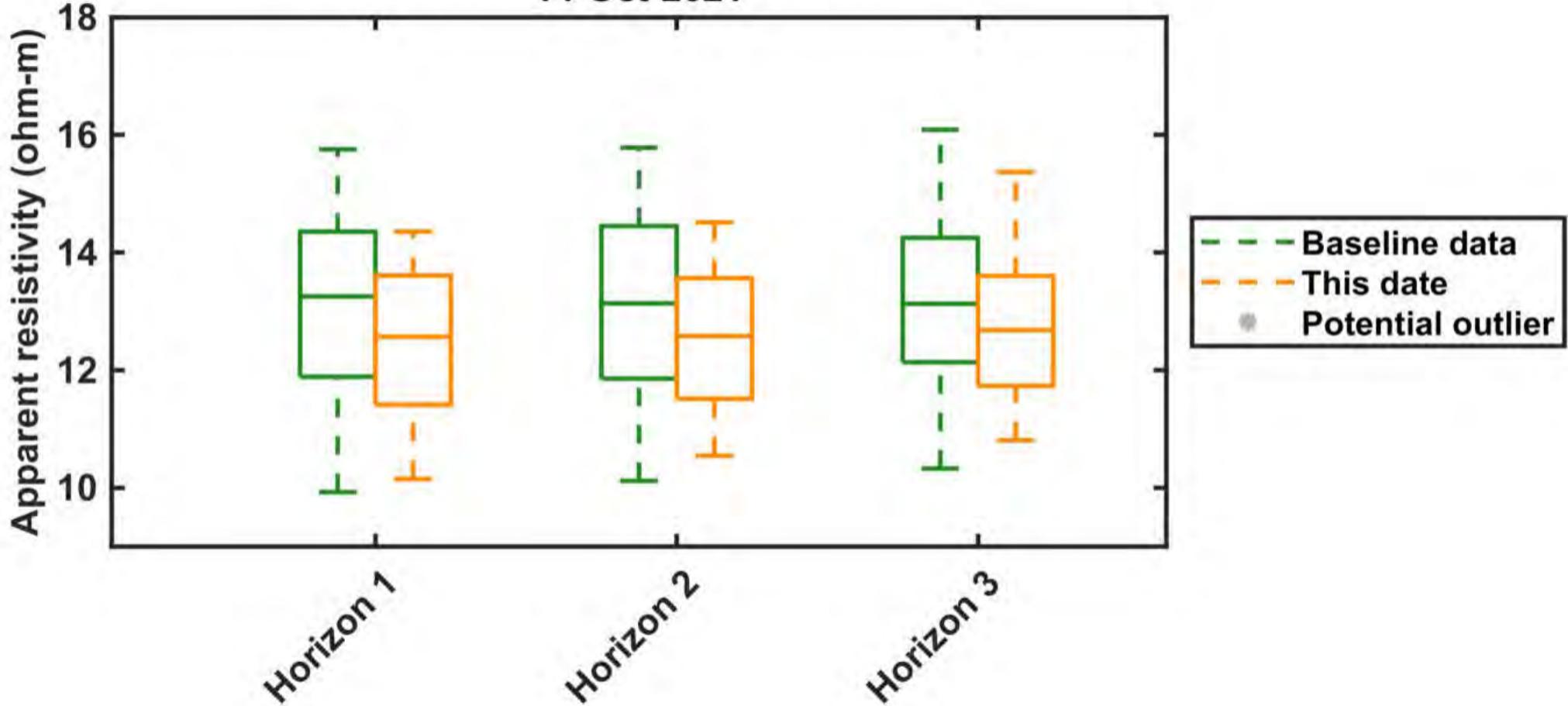
Florence electrical conductivity monitoring

06-Oct-2021



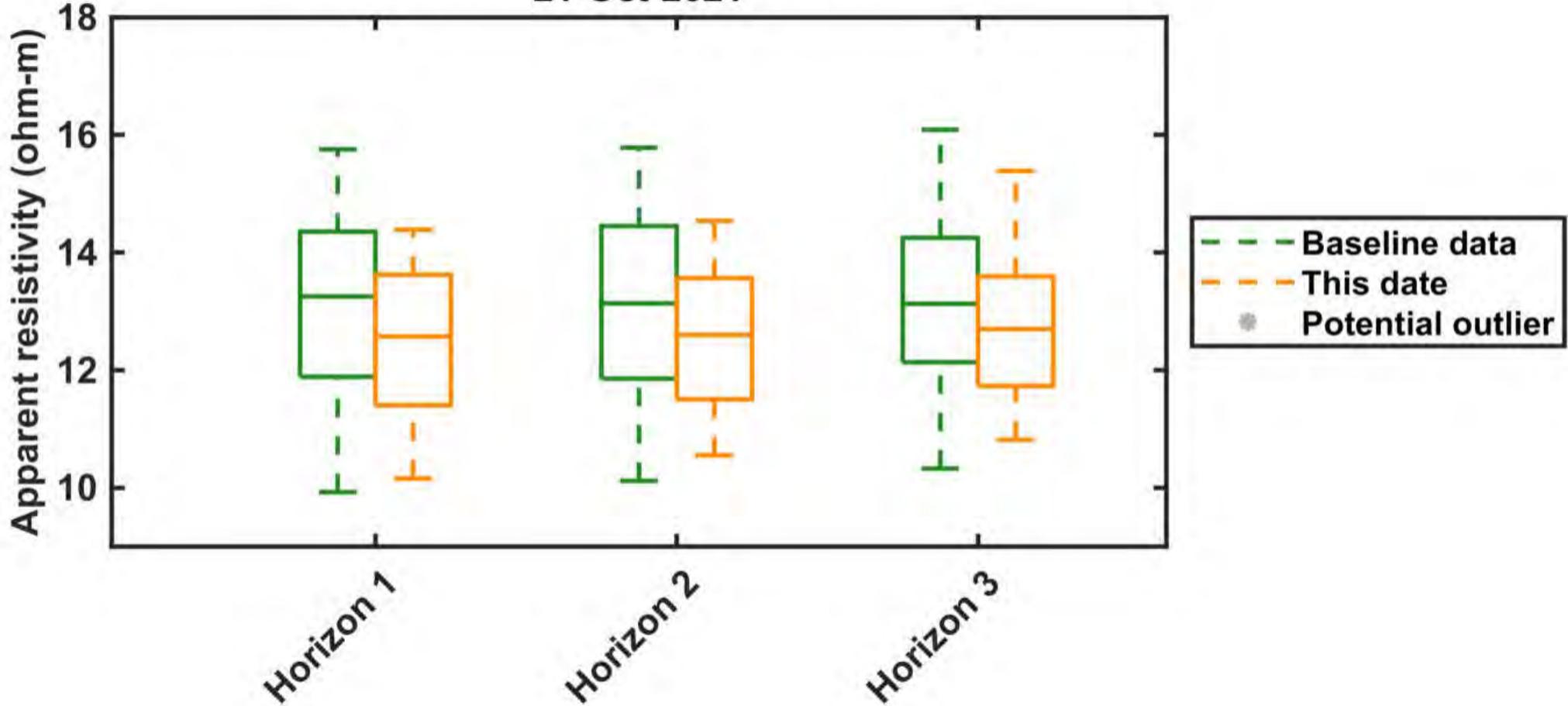
Florence electrical conductivity monitoring

14-Oct-2021



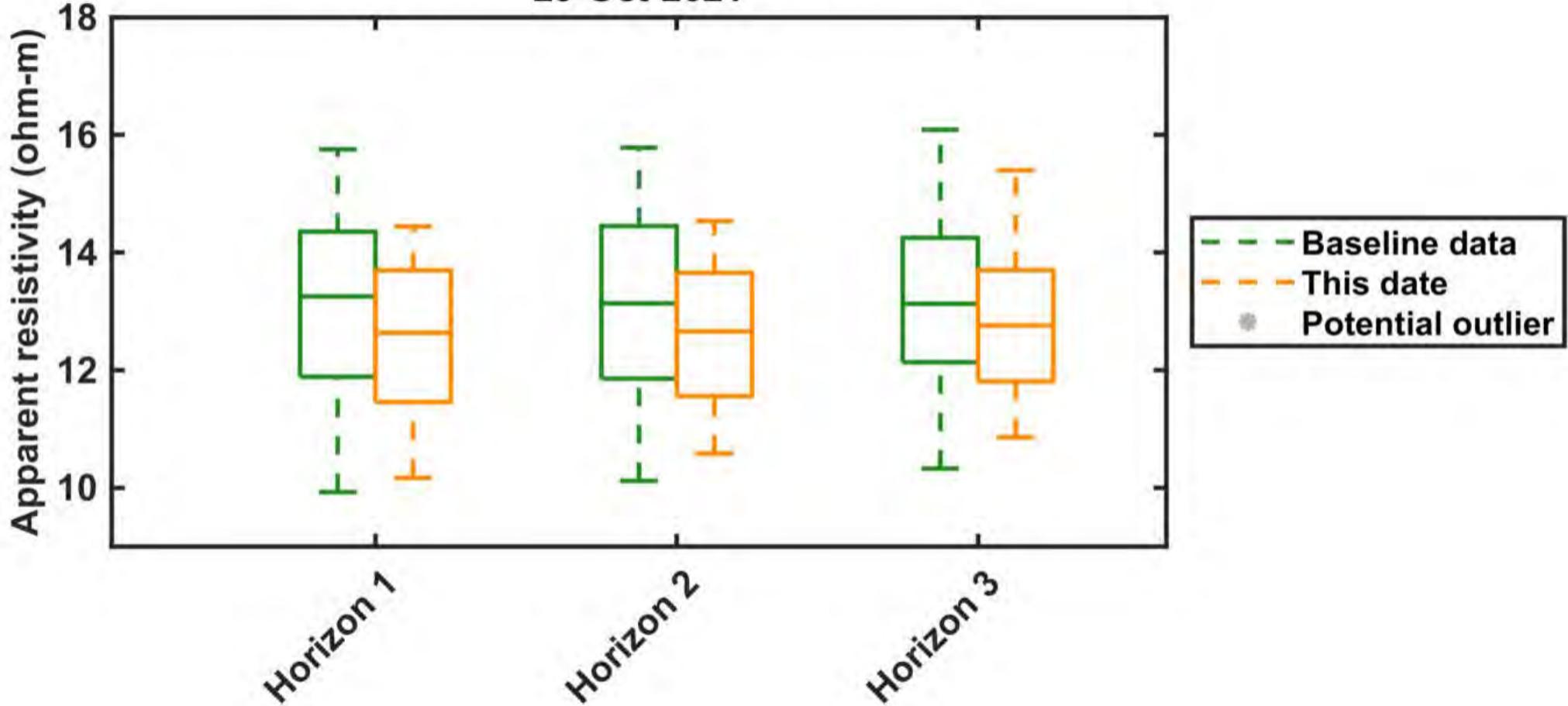
Florence electrical conductivity monitoring

21-Oct-2021



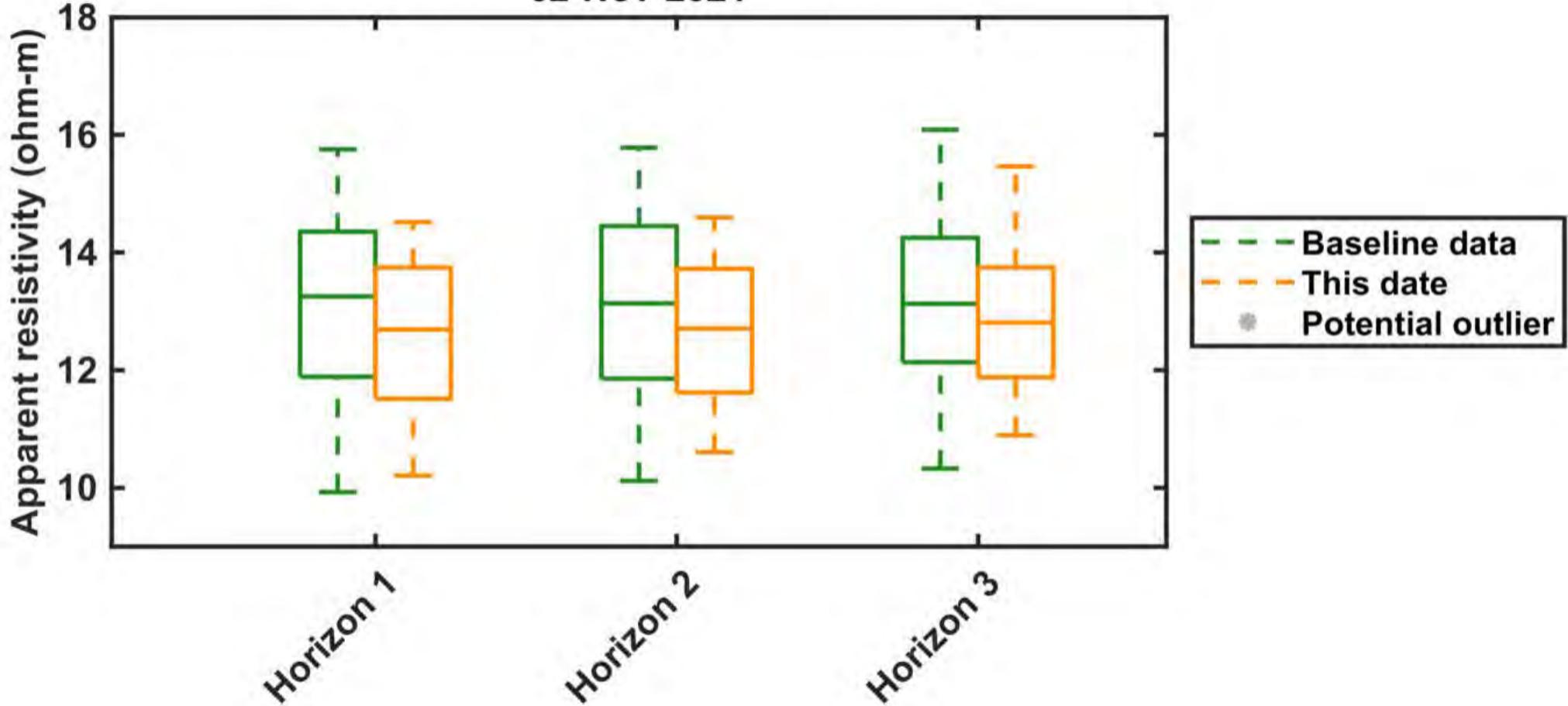
Florence electrical conductivity monitoring

29-Oct-2021



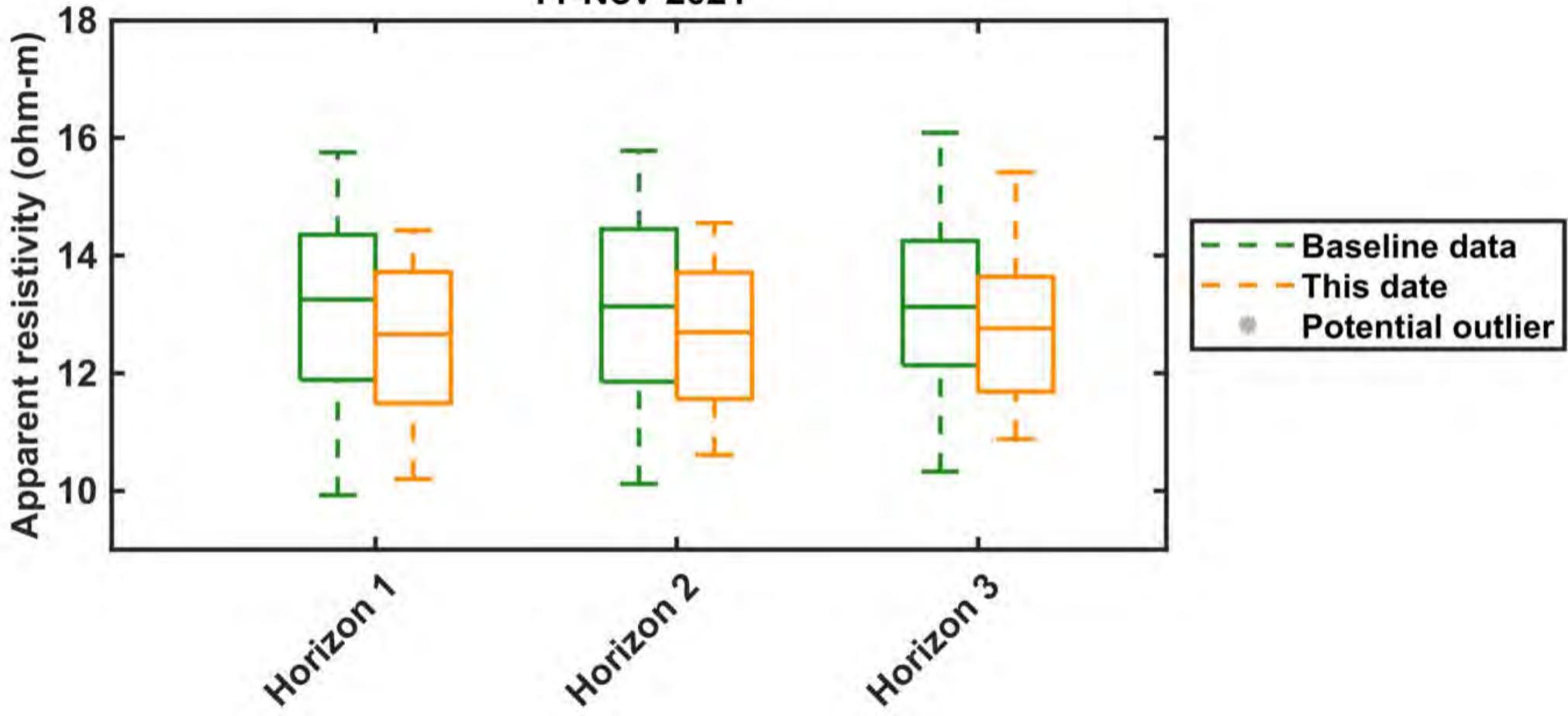
Florence electrical conductivity monitoring

02-Nov-2021



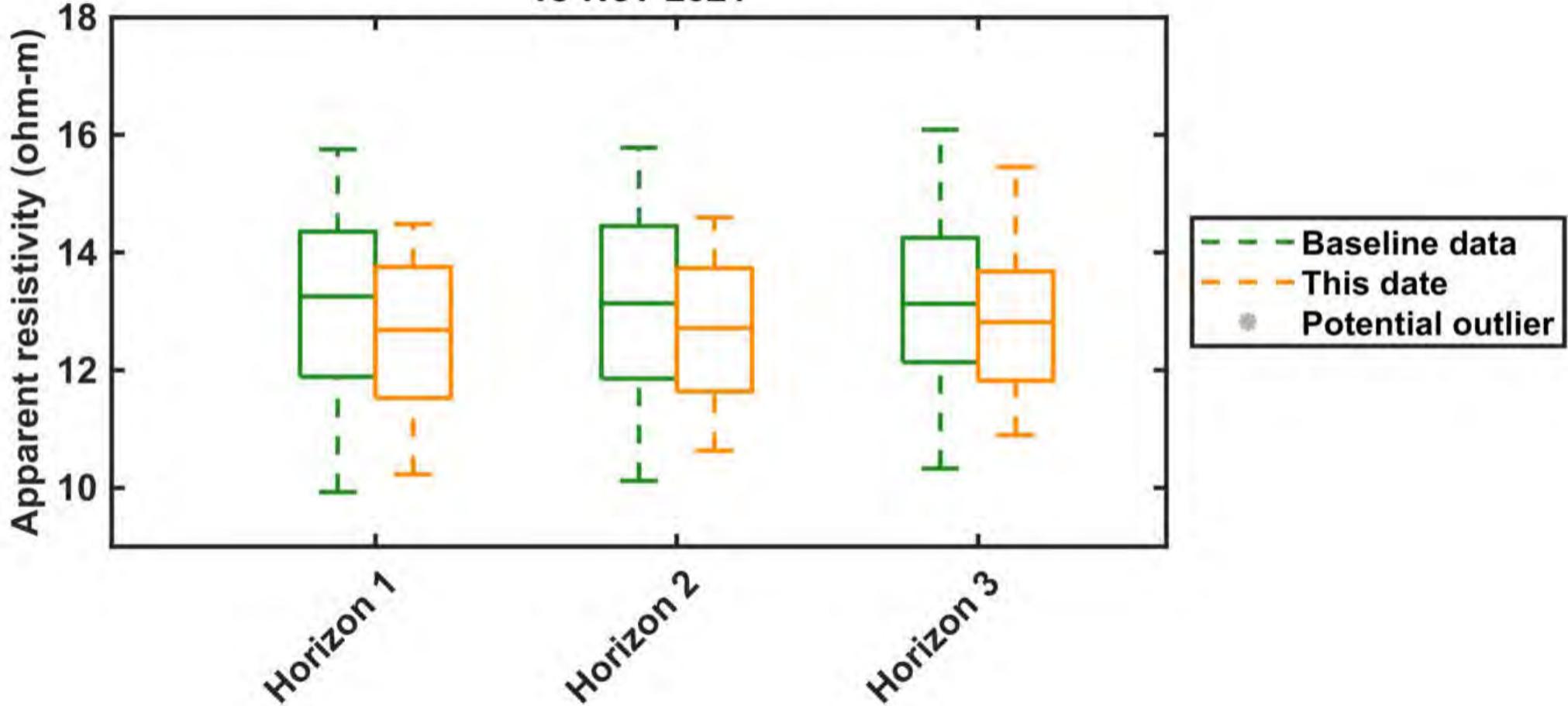
Florence electrical conductivity monitoring

11-Nov-2021



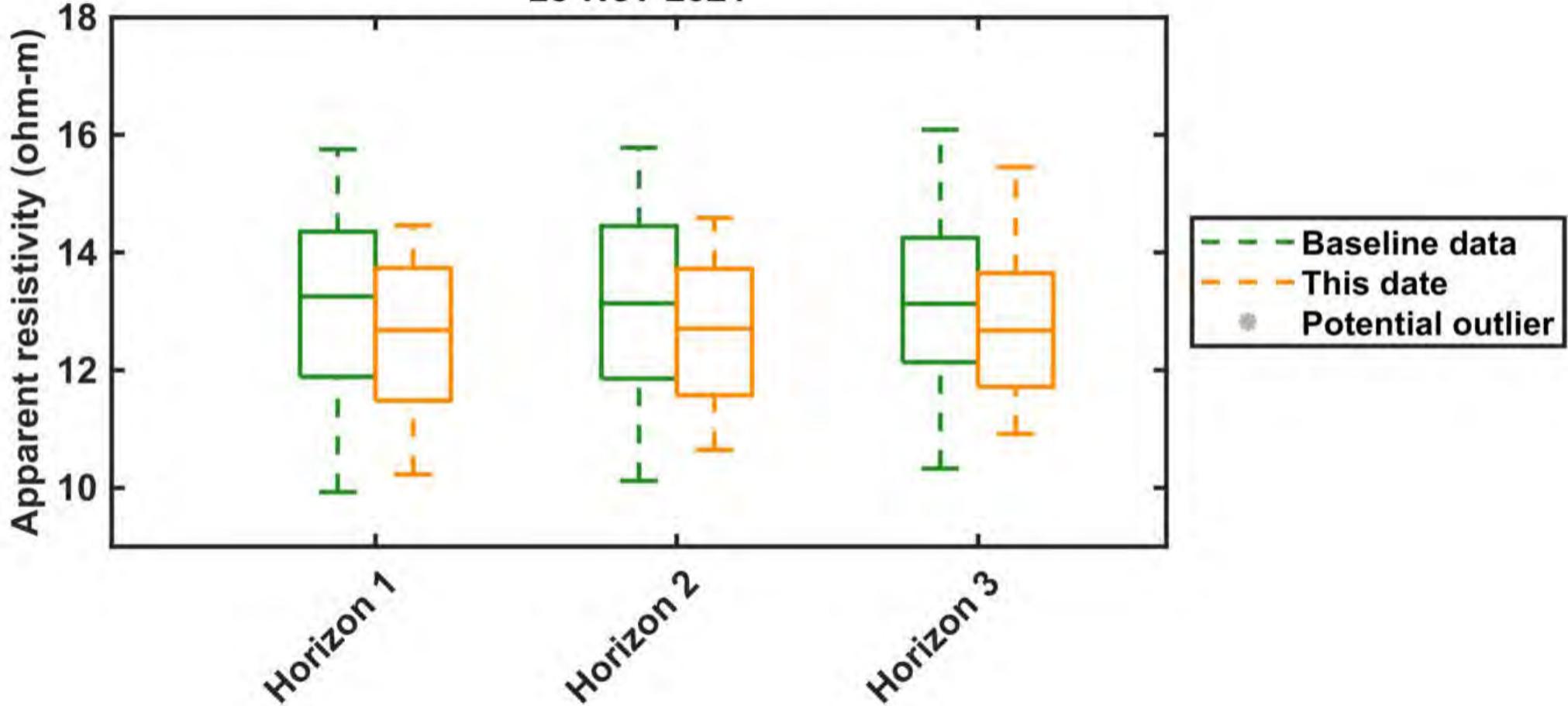
Florence electrical conductivity monitoring

18-Nov-2021



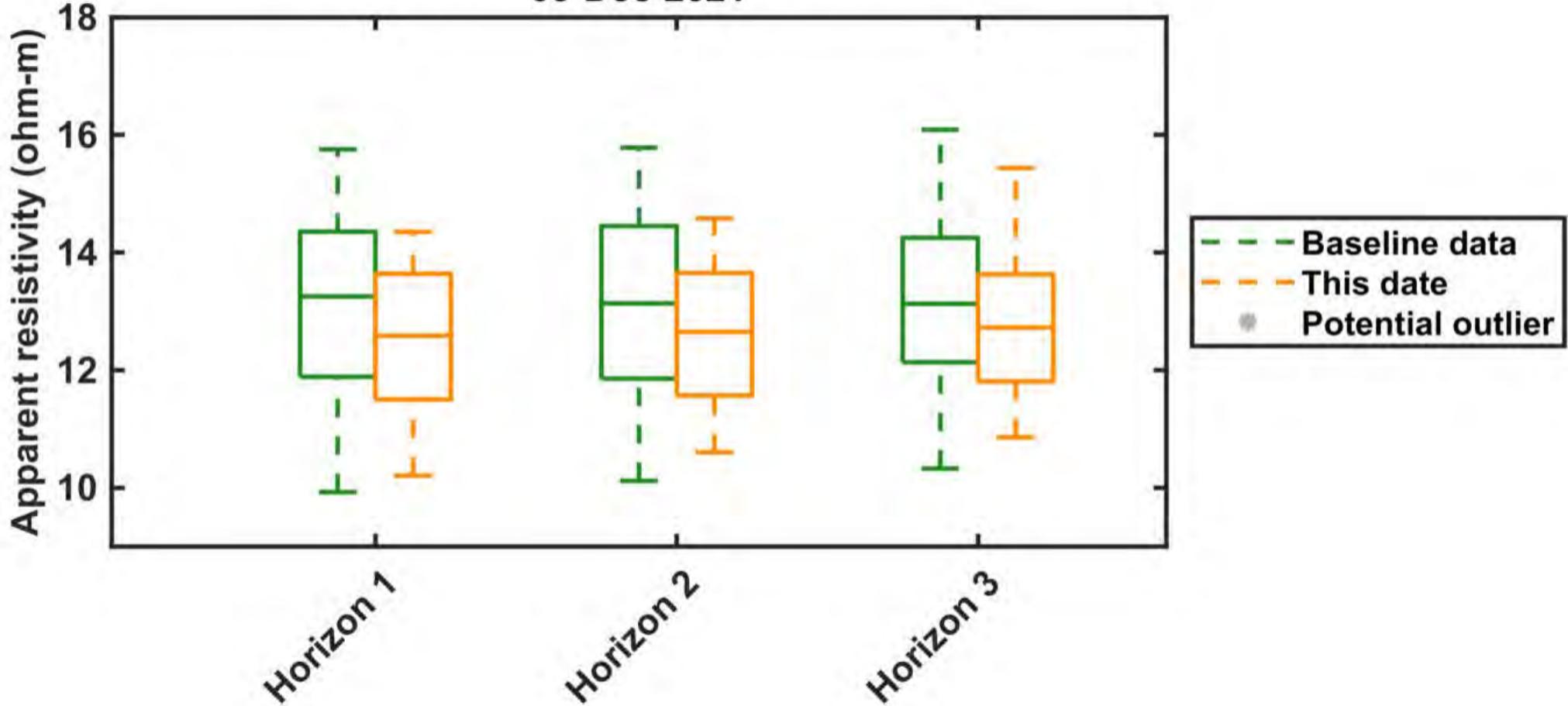
Florence electrical conductivity monitoring

23-Nov-2021



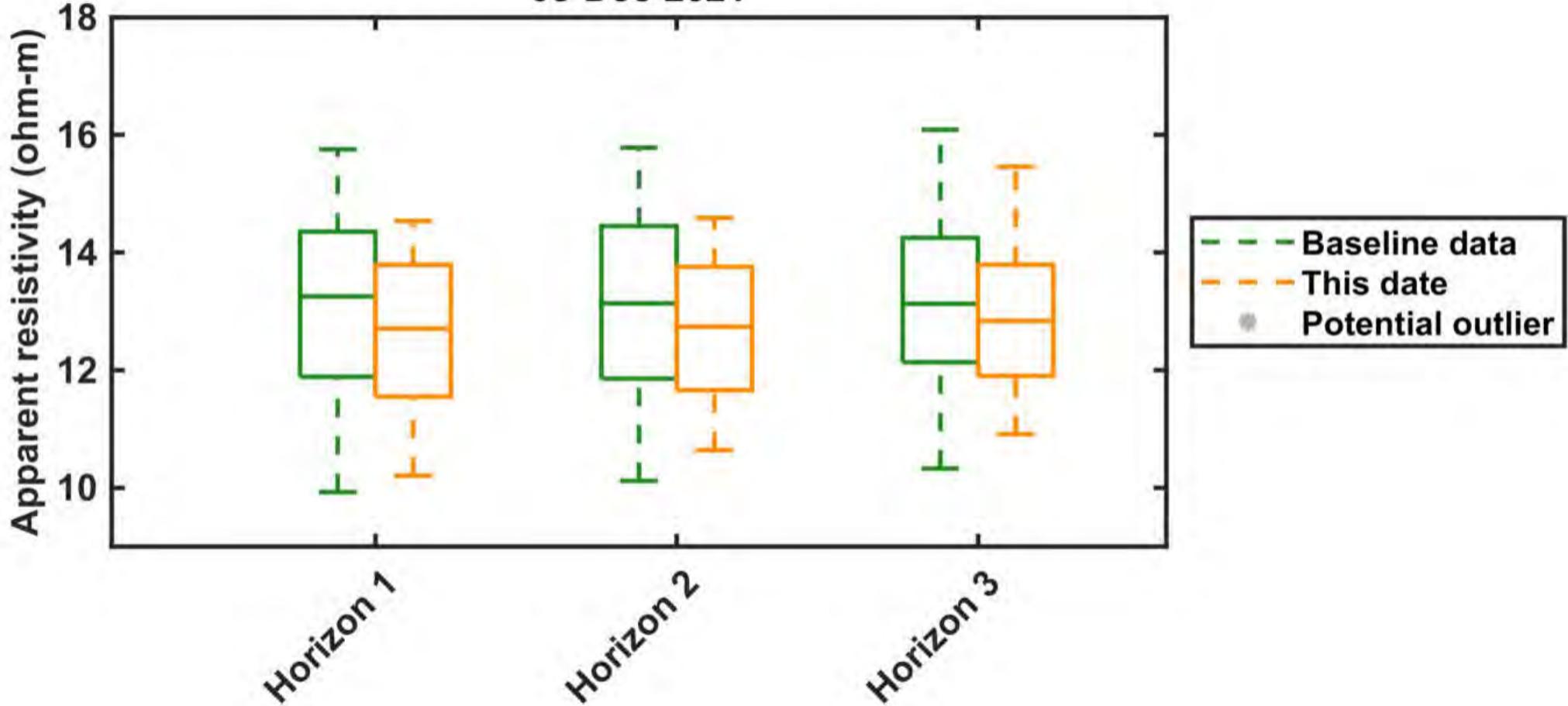
Florence electrical conductivity monitoring

03-Dec-2021



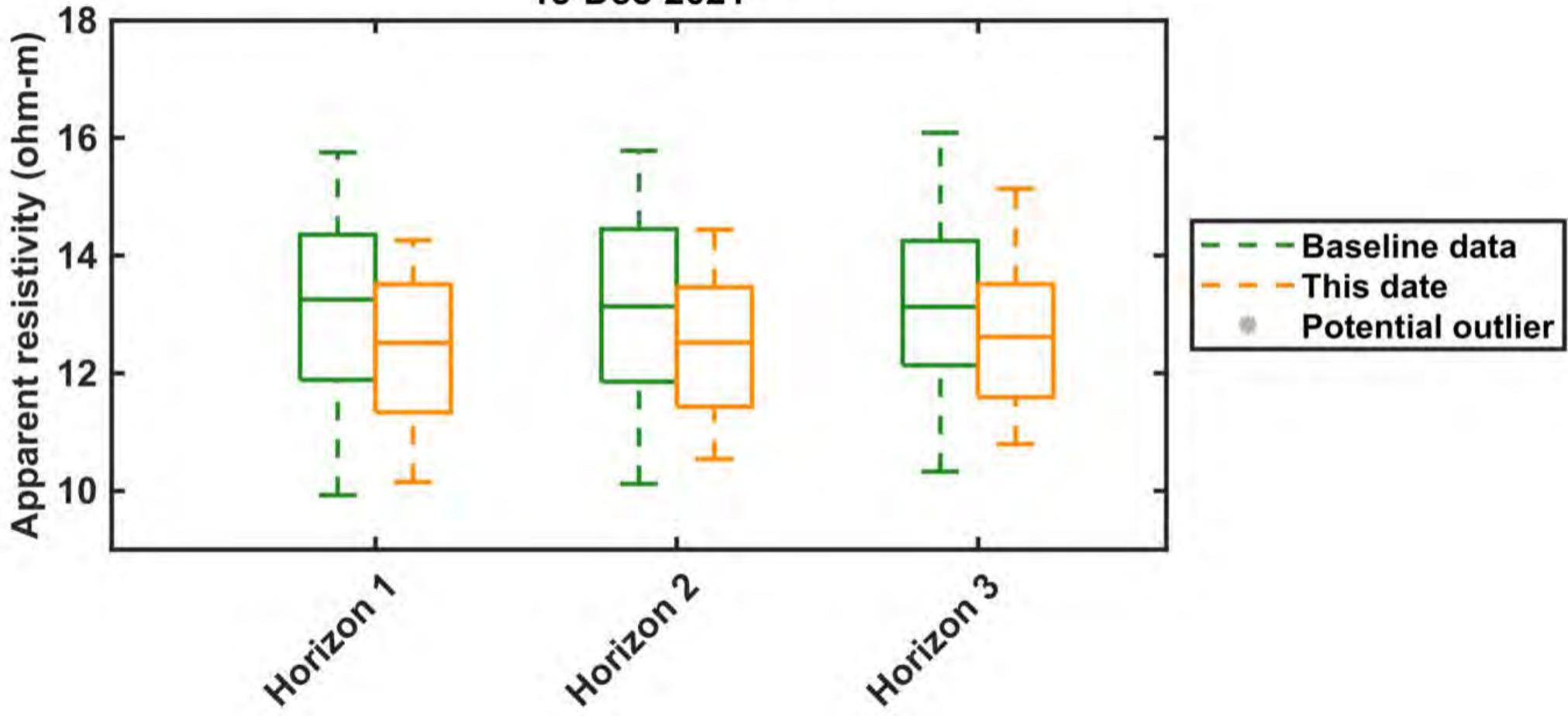
Florence electrical conductivity monitoring

08-Dec-2021



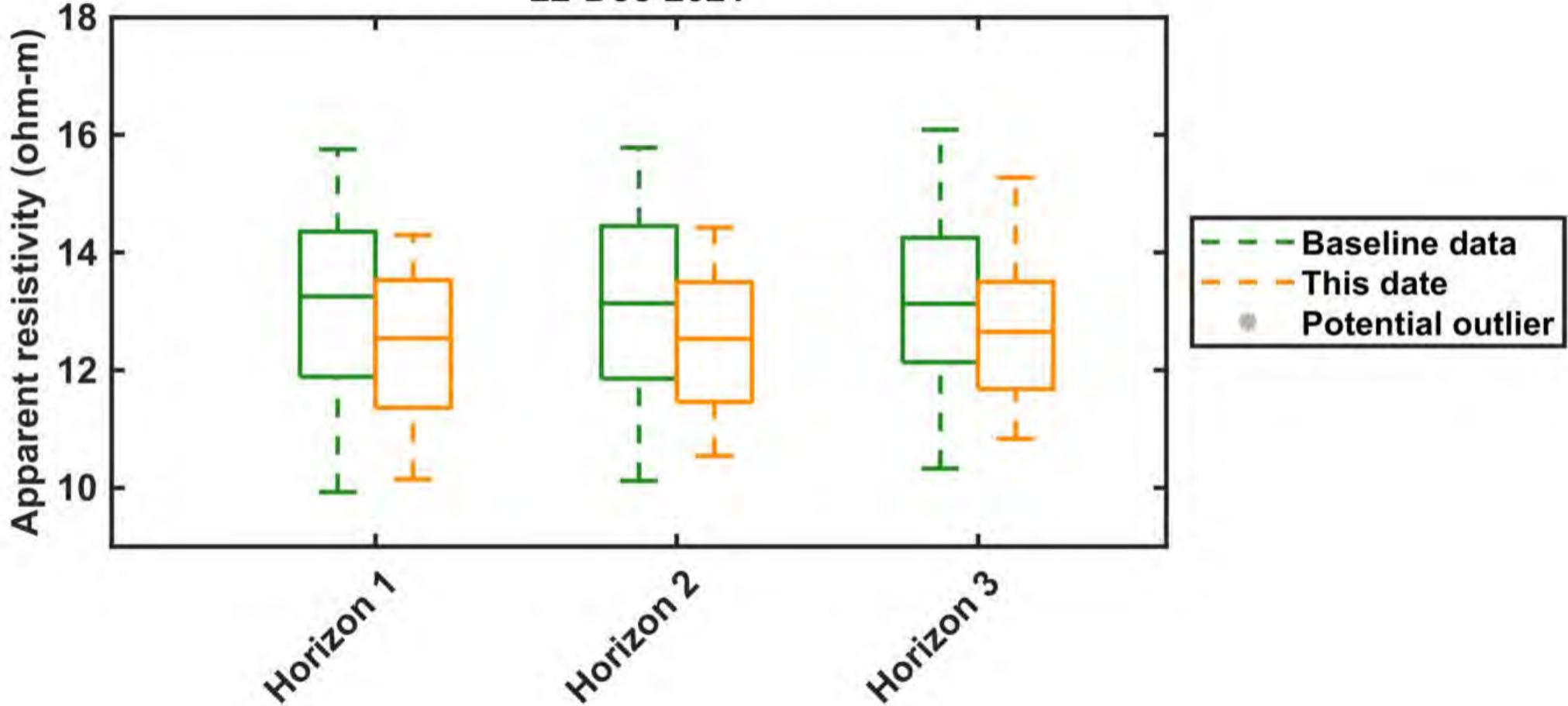
Florence electrical conductivity monitoring

15-Dec-2021



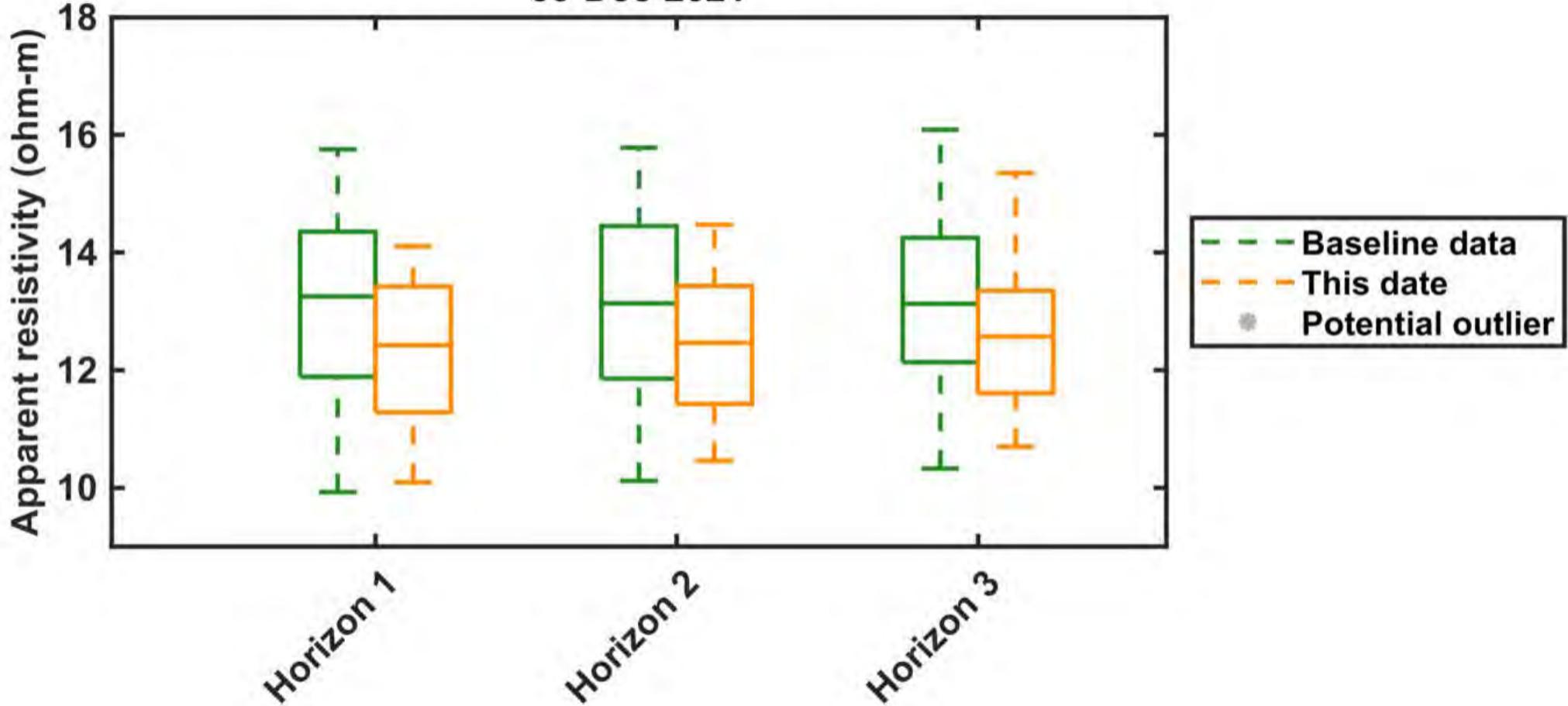
Florence electrical conductivity monitoring

22-Dec-2021



Florence electrical conductivity monitoring

30-Dec-2021

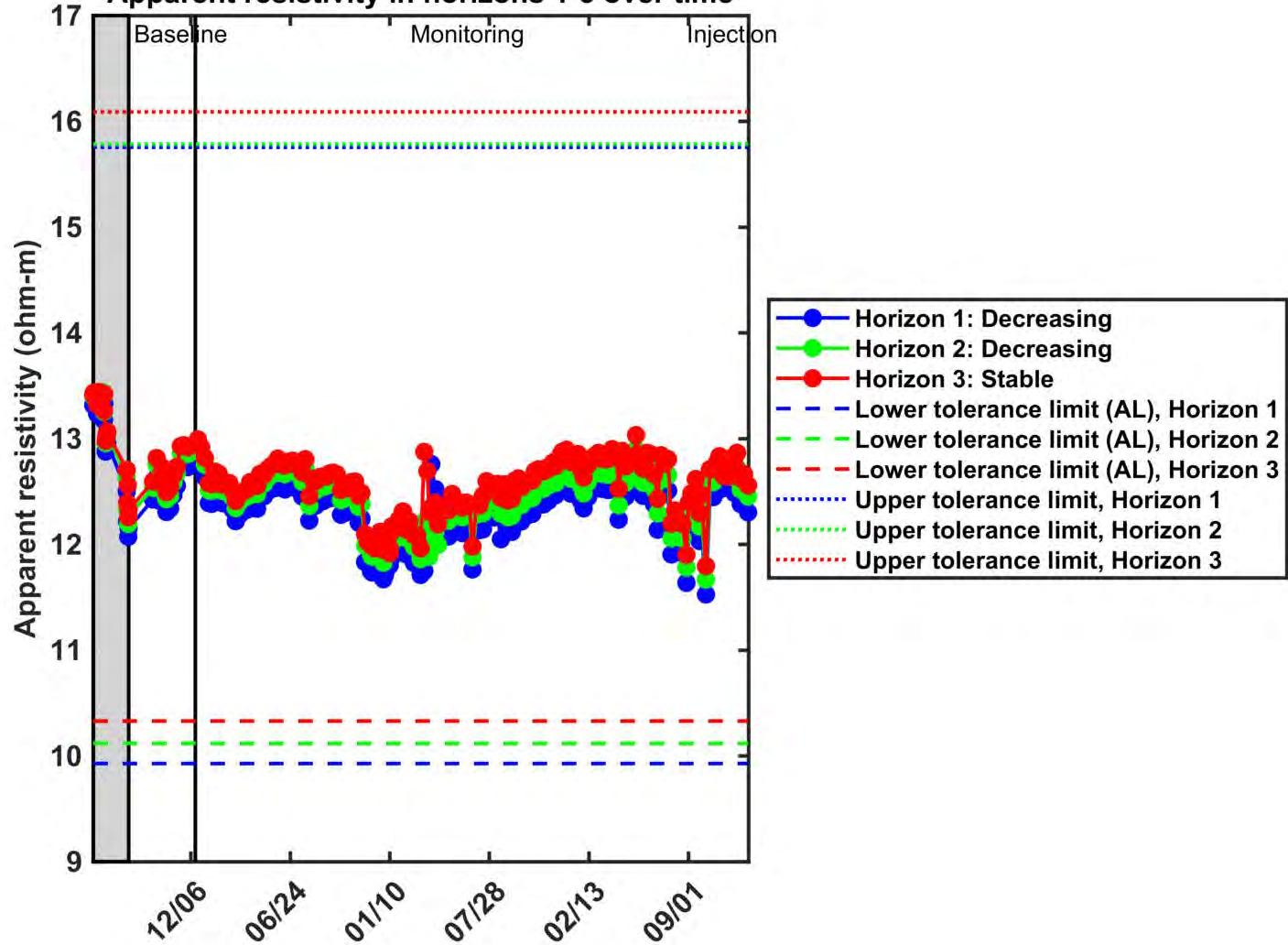


ATTACHMENT B

Summary Plot of Bulk Electrical Conductivity

Florence ambient electrical conductivity monitoring

Apparent resistivity in horizons 1-3 over time



ATTACHMENT 6

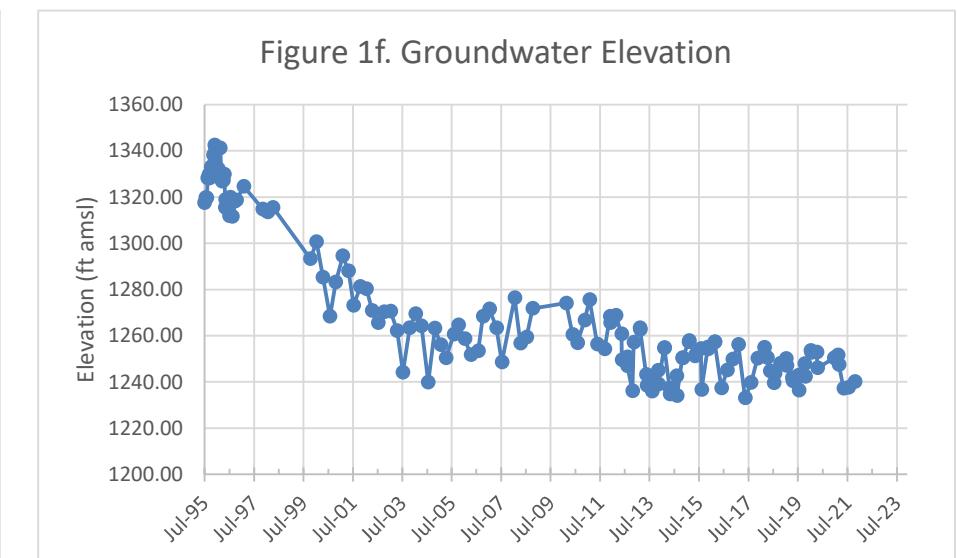
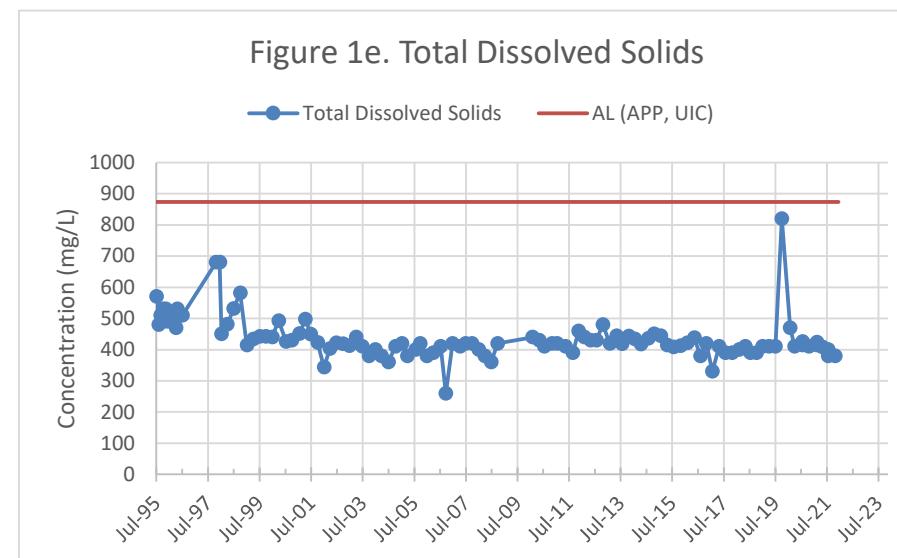
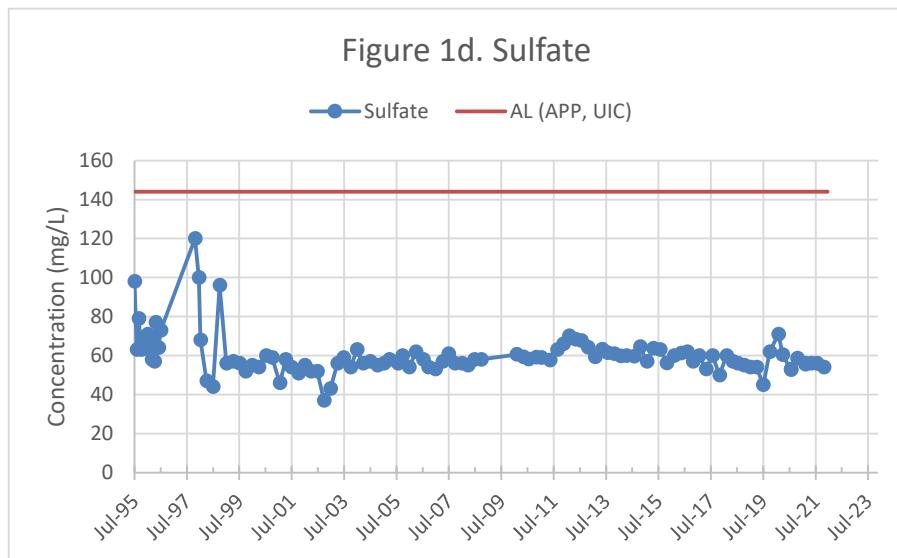
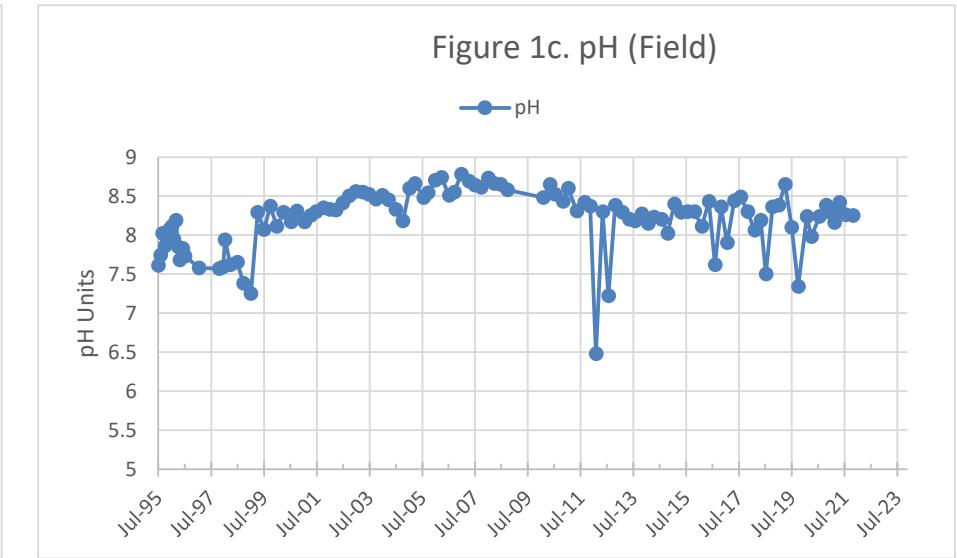
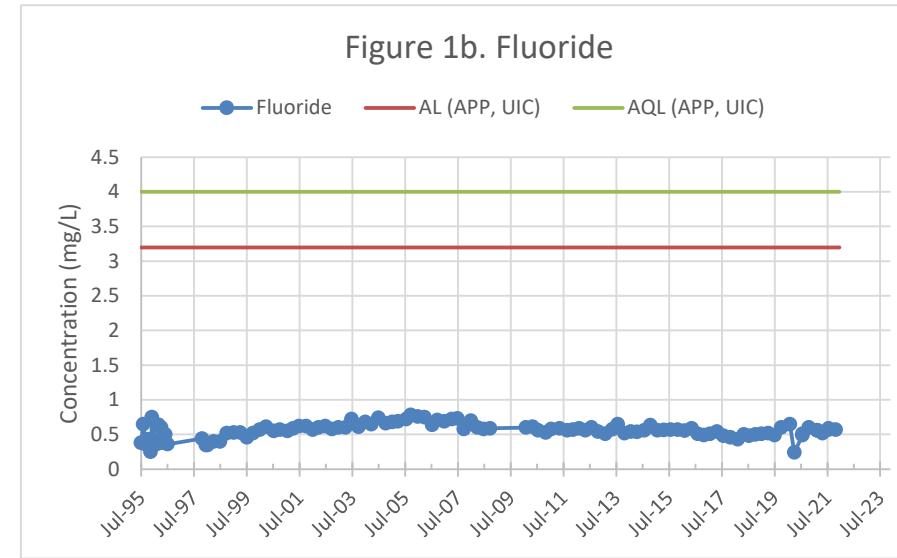
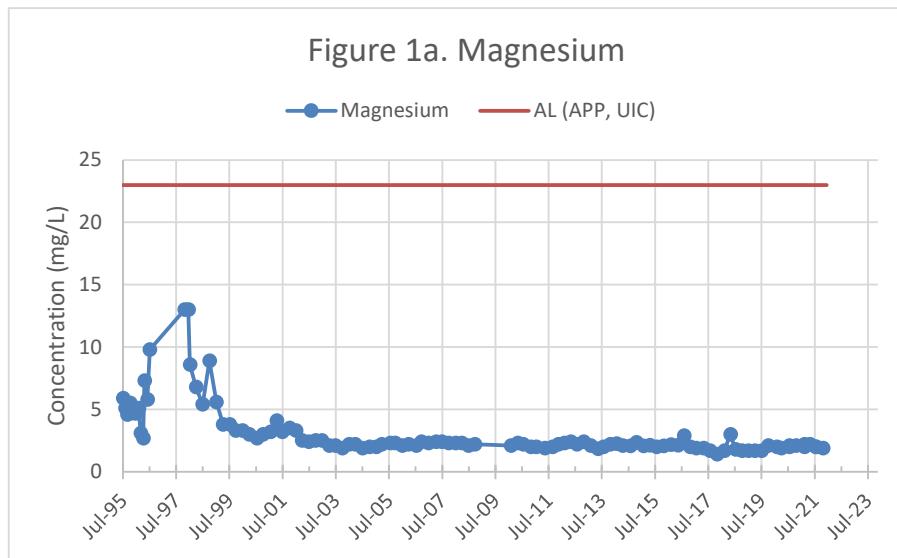
Table and Graphs of Monitor Well Water Levels and Analytical Results

- 6A. Quarterly Concentration Graphs**
- 6B. Well Details and Water Level Elevations**
- 6C. Groundwater Monitoring Summary**

ATTACHMENT 6A

Quarterly Concentration Graphs

M14-GL QUARTERLY CONCENTRATION GRAPHS



Notes:

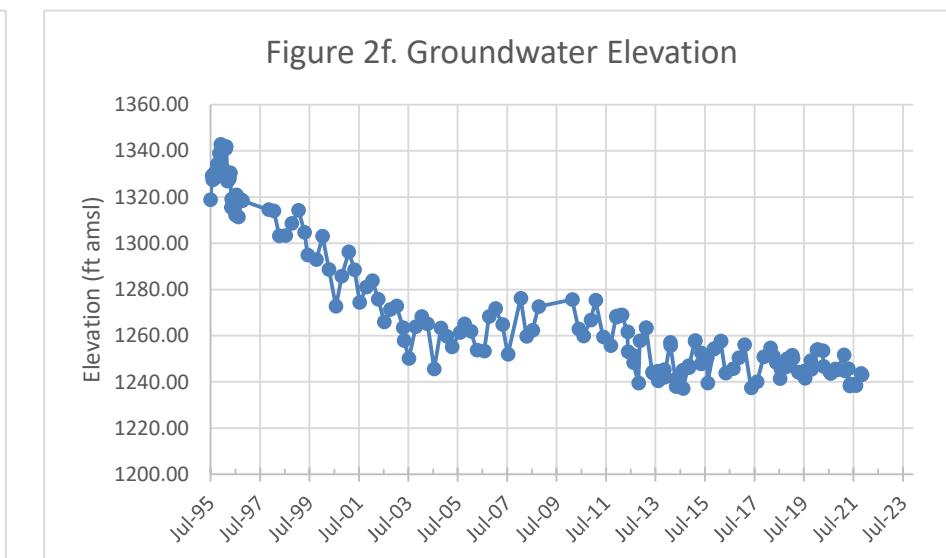
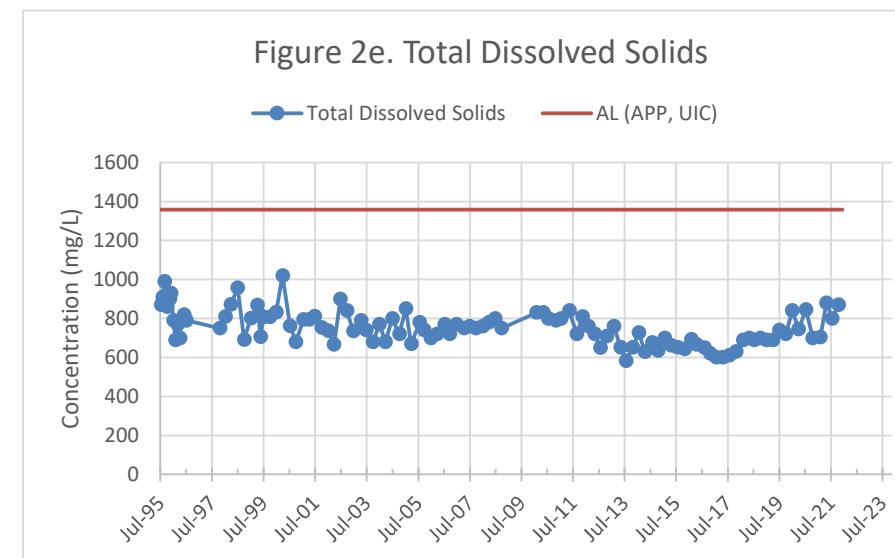
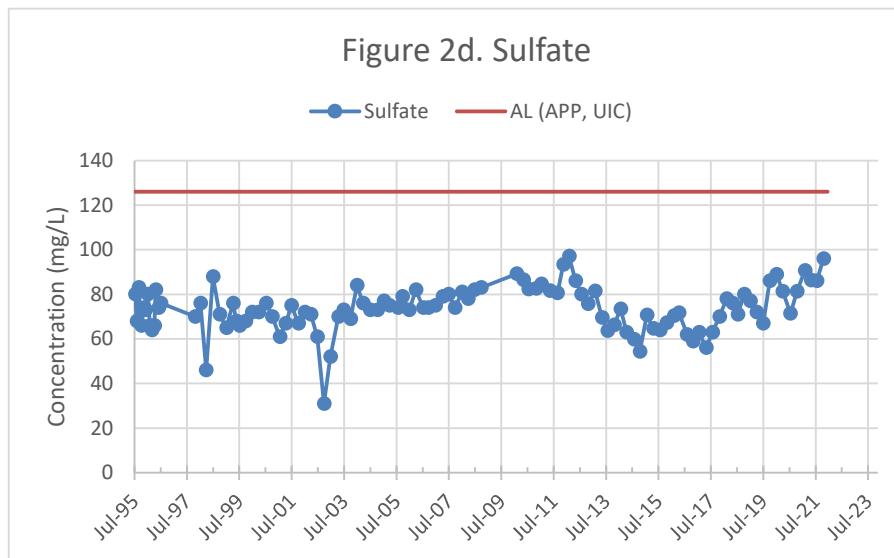
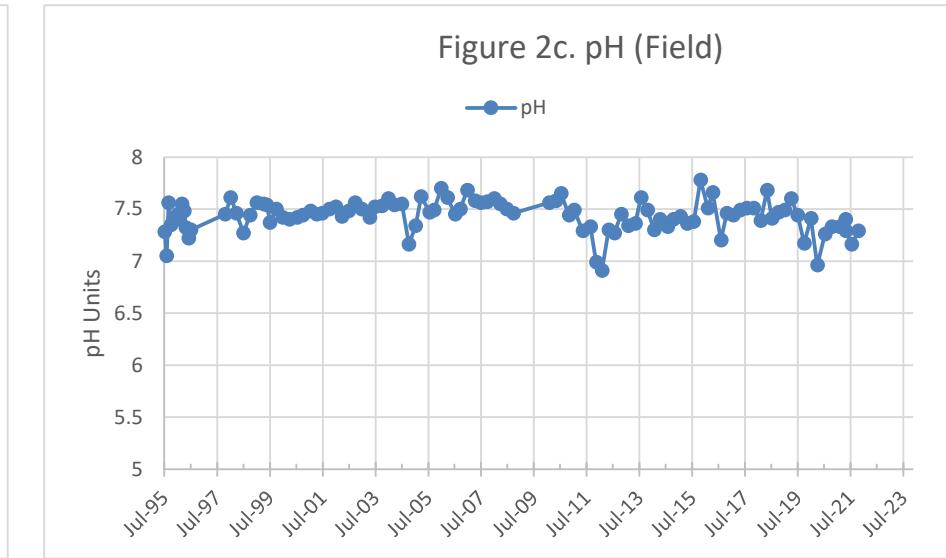
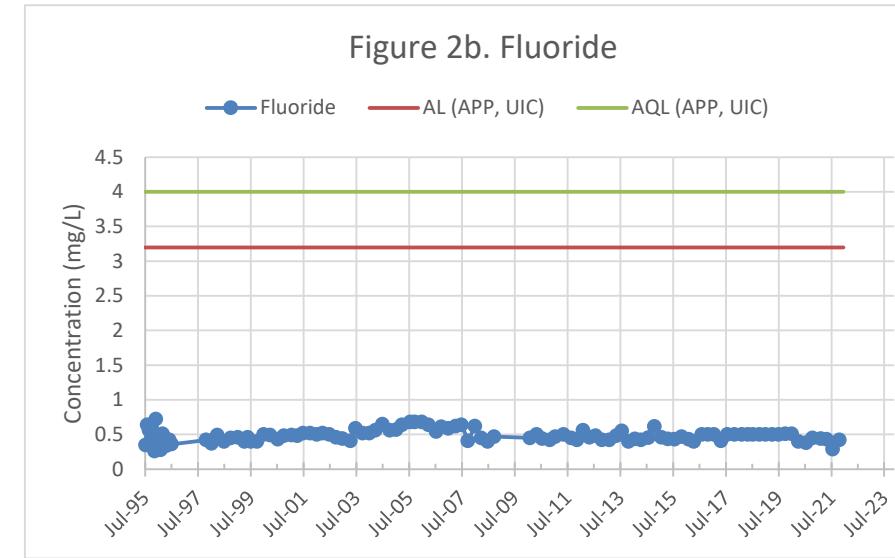
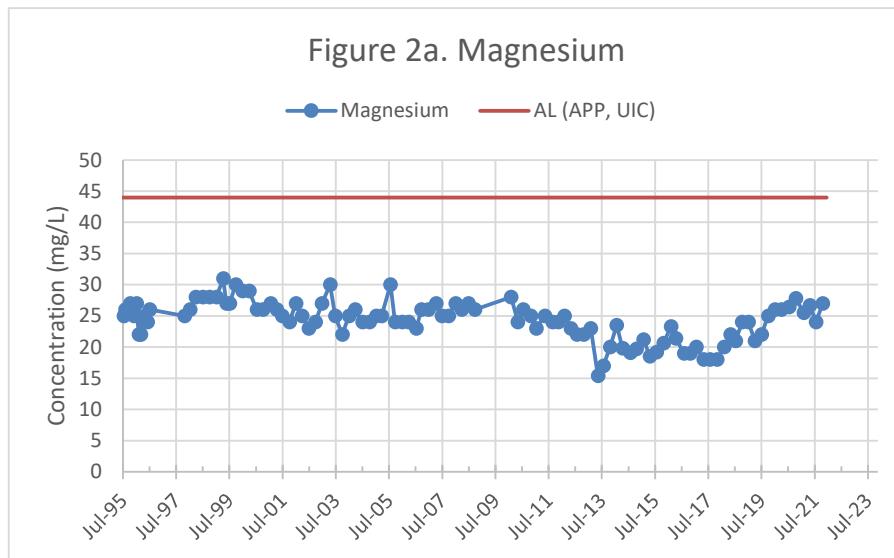
AL = Alert level

AQL = Aquifer Quality Limit

APP = APP No. P-101704

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M15-GU QUARTERLY CONCENTRATION GRAPHS



Notes:

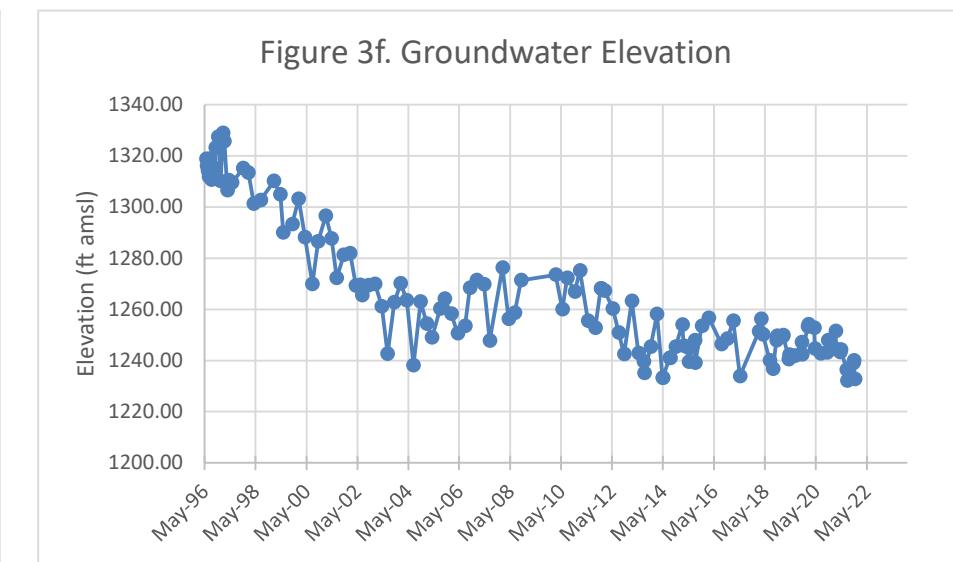
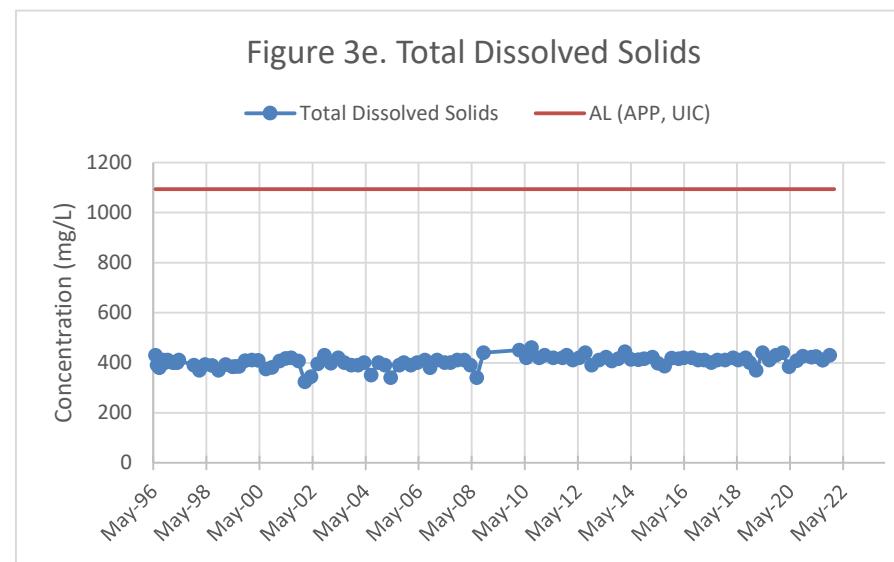
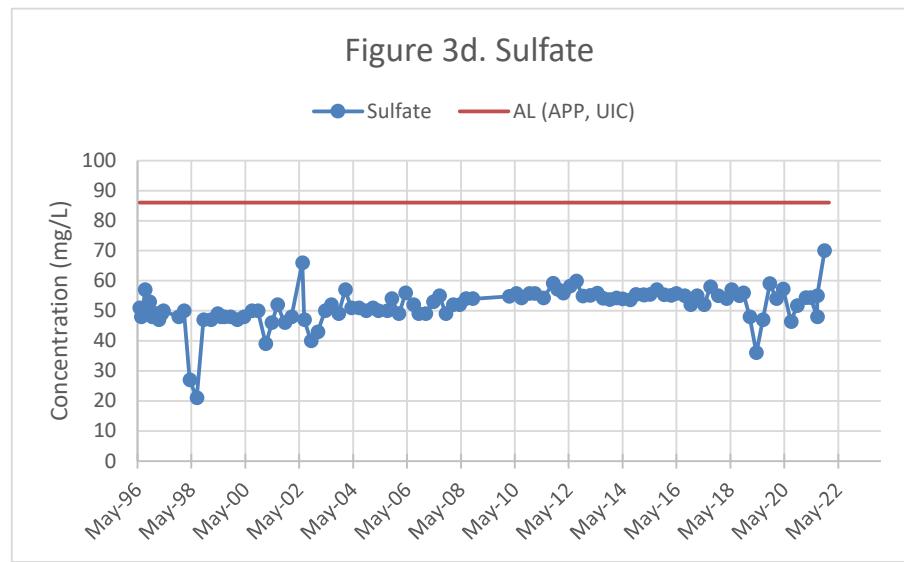
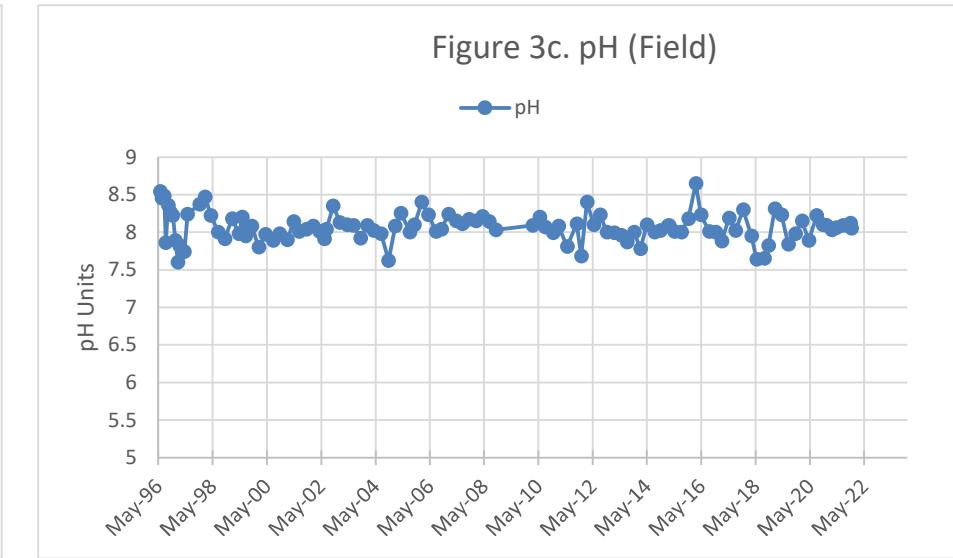
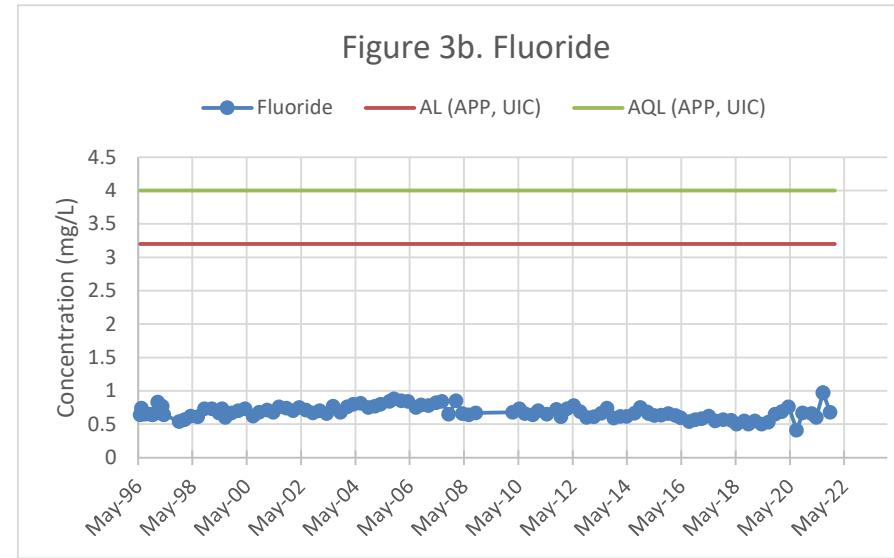
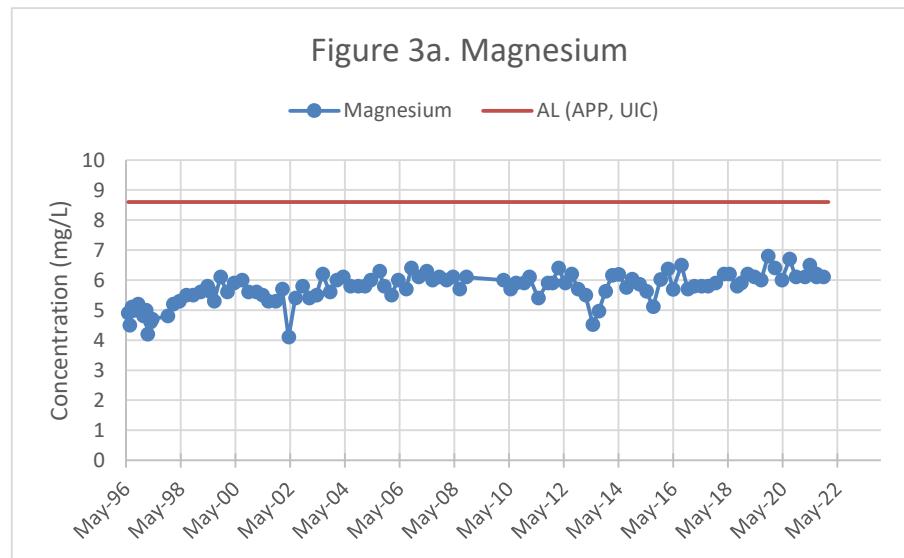
AL = Alert level

AQL = Aquifer Quality Limit

APP = APP No. P-101704

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M22-O QUARTERLY CONCENTRATION GRAPHS



Notes:

Historical outliers removed from graphs for visual representation, but are maintained in the dataset.

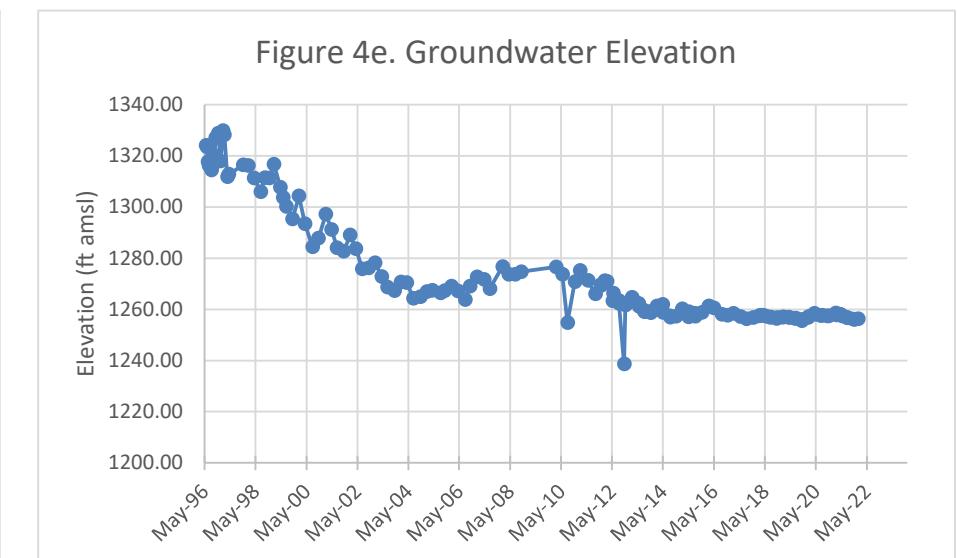
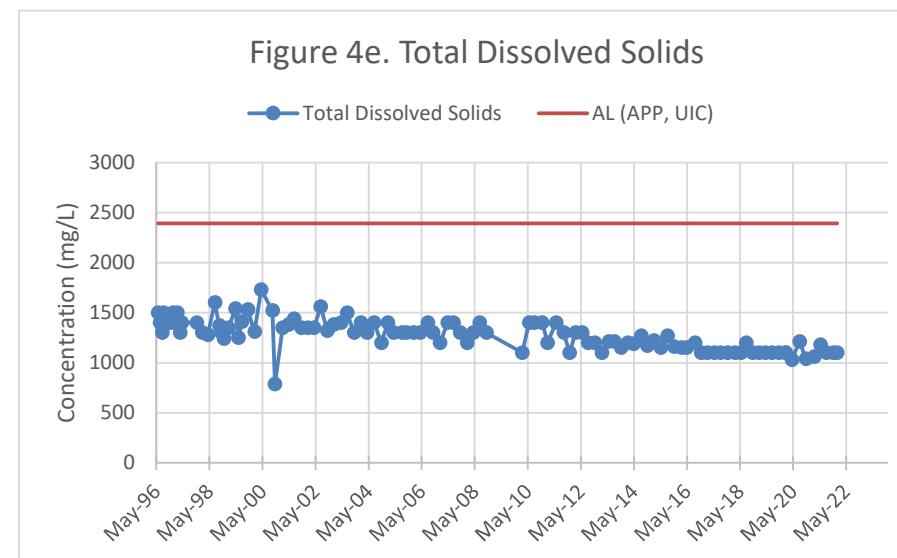
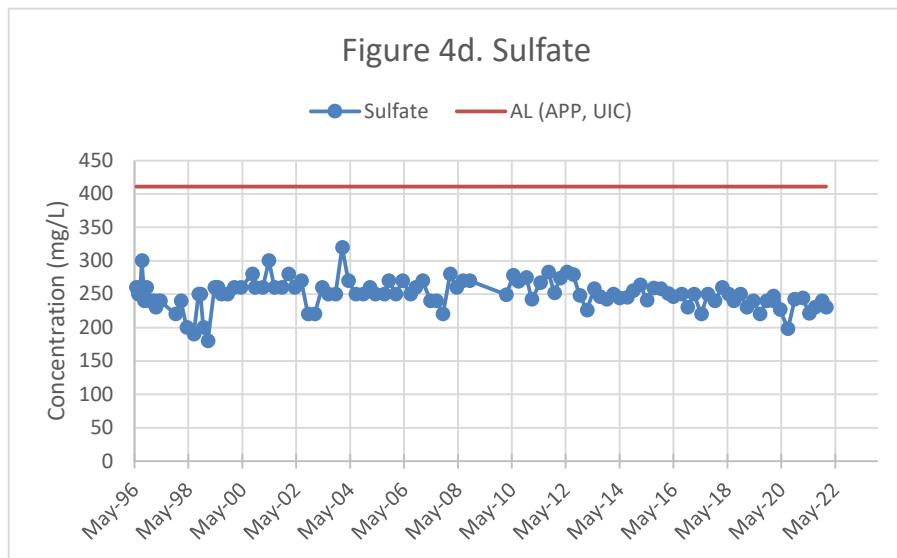
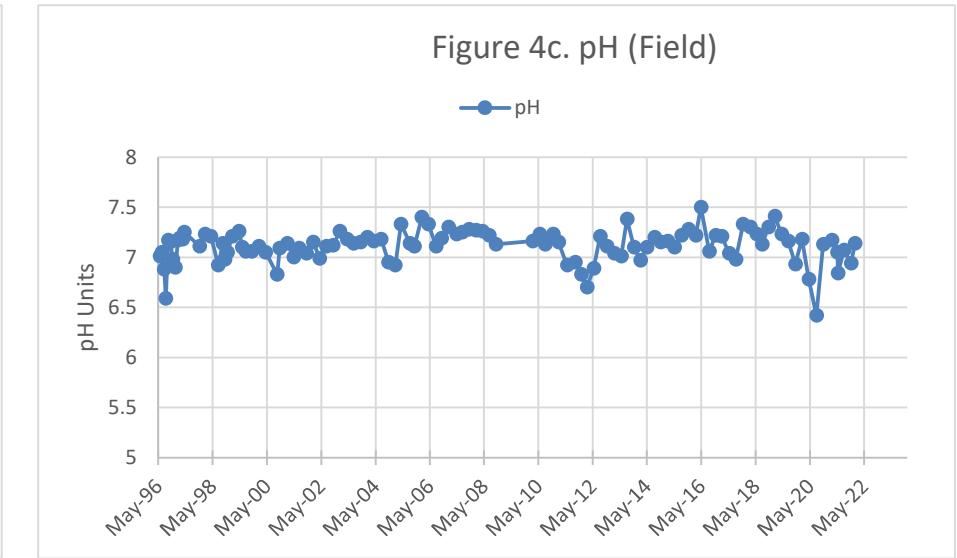
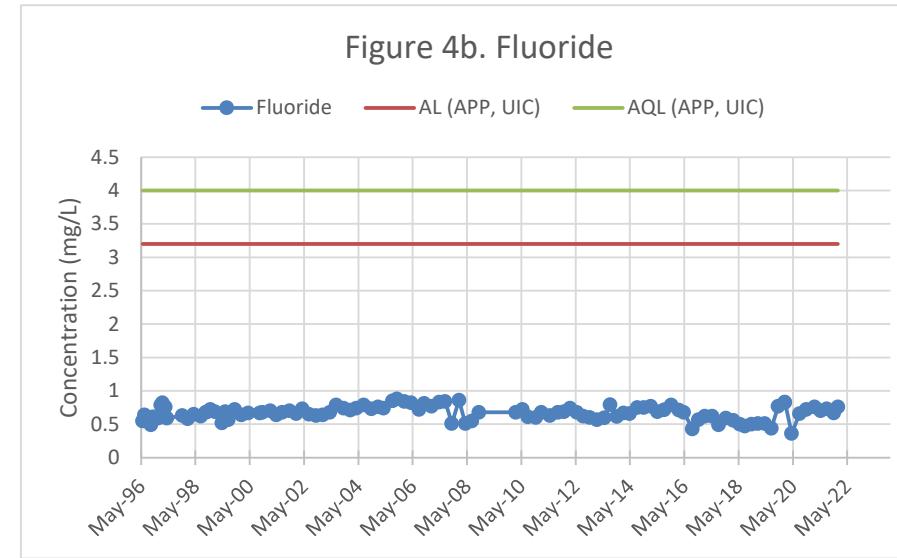
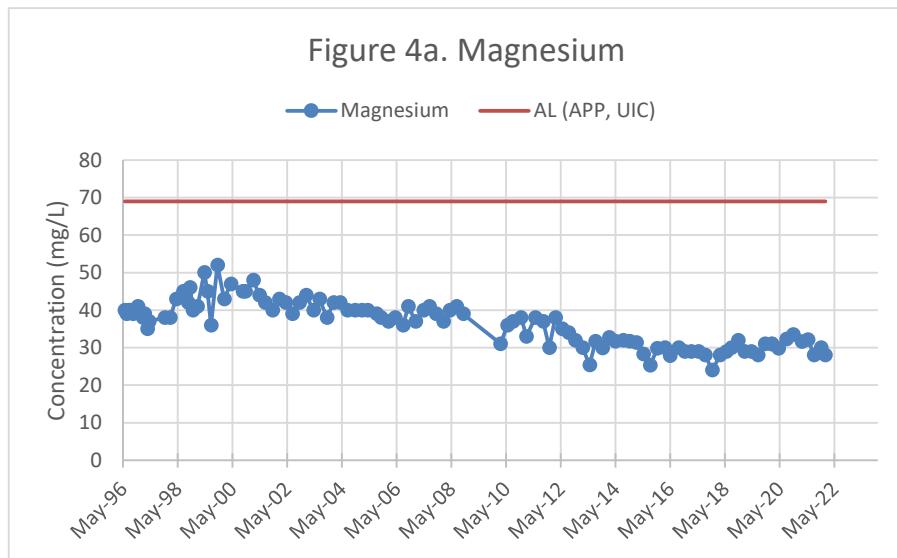
AL = Alert level

AQL = Aquifer Quality Limit

APP = APP No. P-101704

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M23-UBF QUARTERLY CONCENTRATION GRAPHS



Notes:

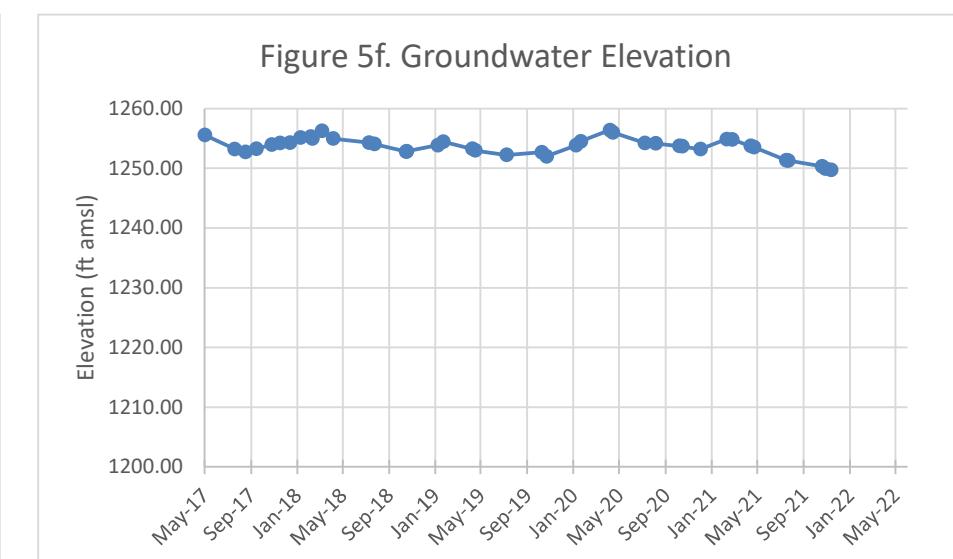
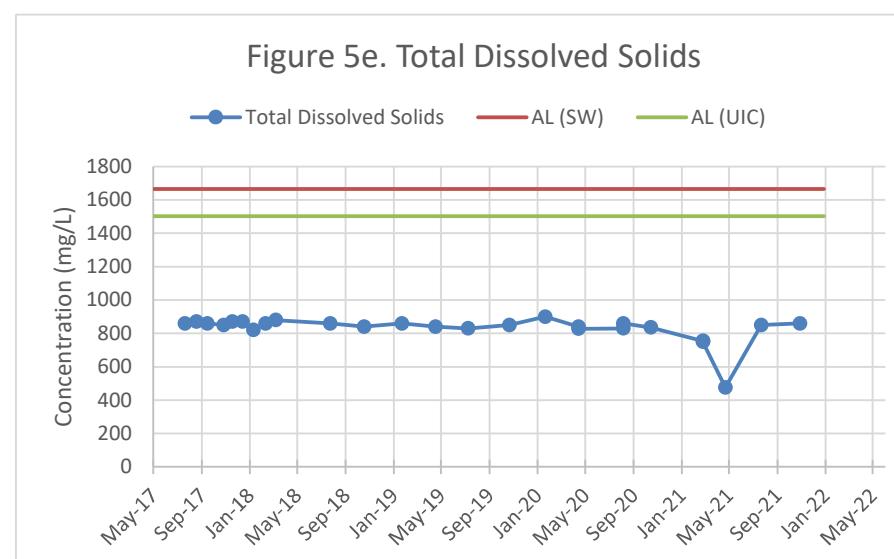
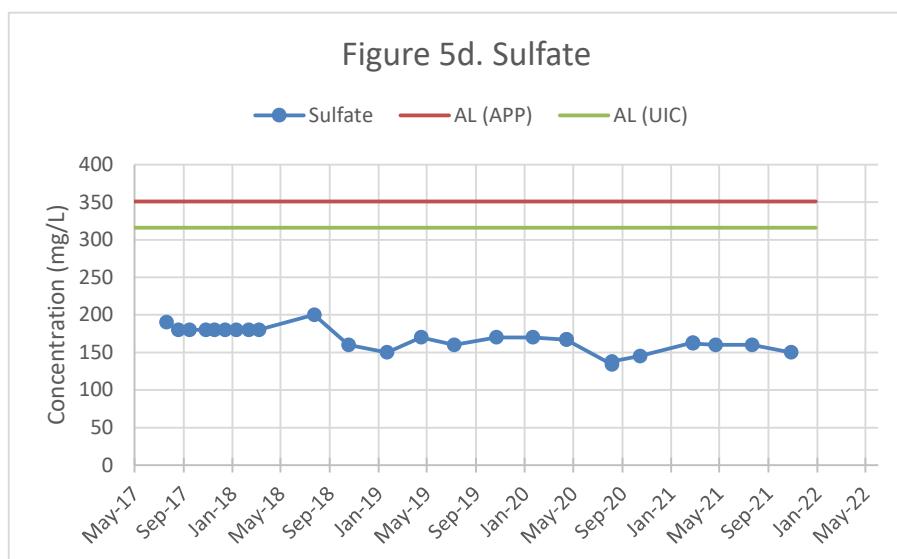
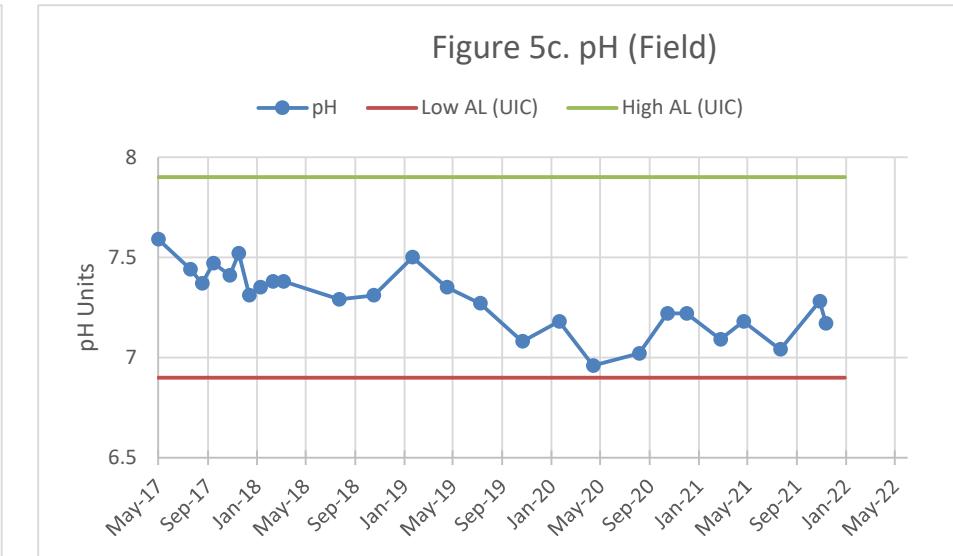
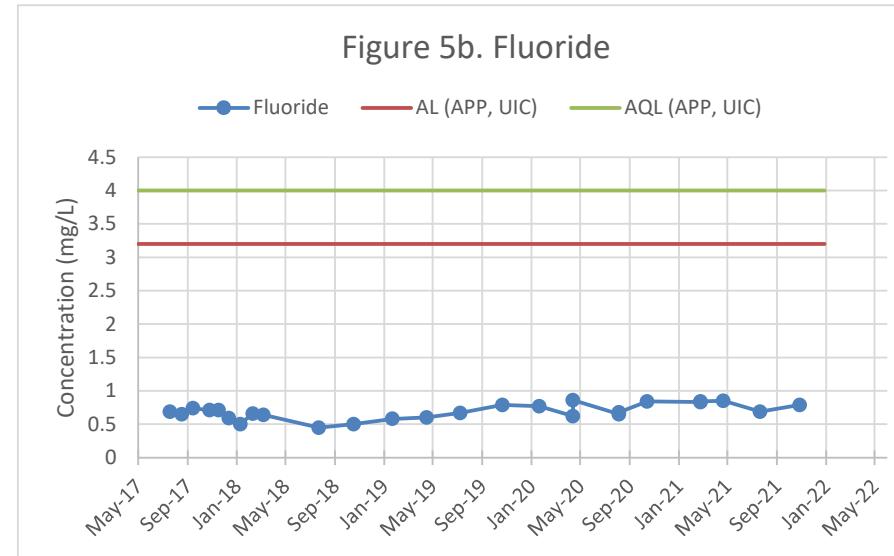
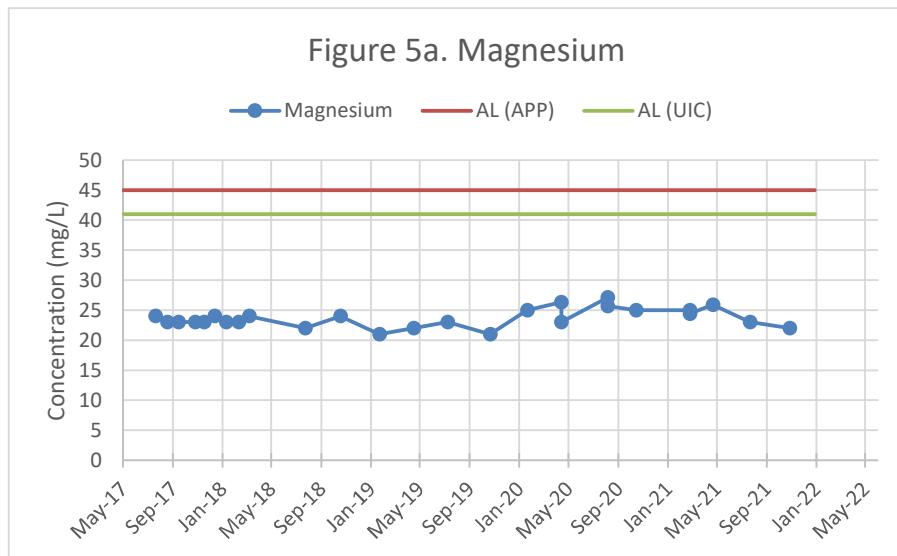
AL = Alert level

AQL = Aquifer Quality Limit

APP = APP No. P-101704

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M52-UBF QUARTERLY CONCENTRATION GRAPHS



Notes:

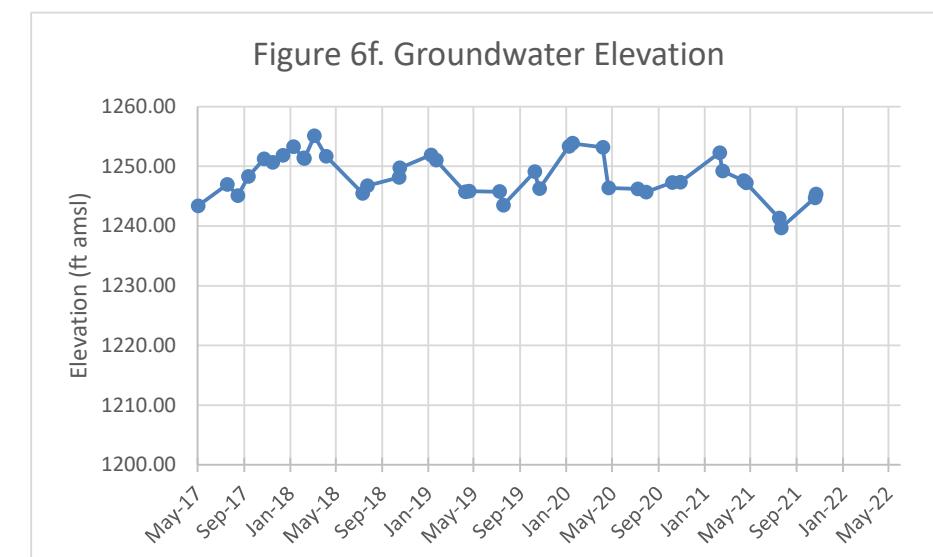
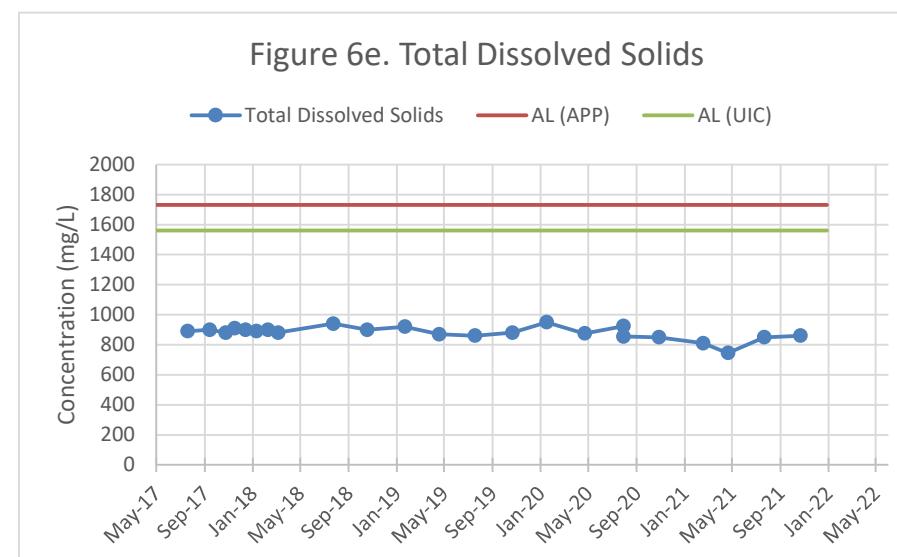
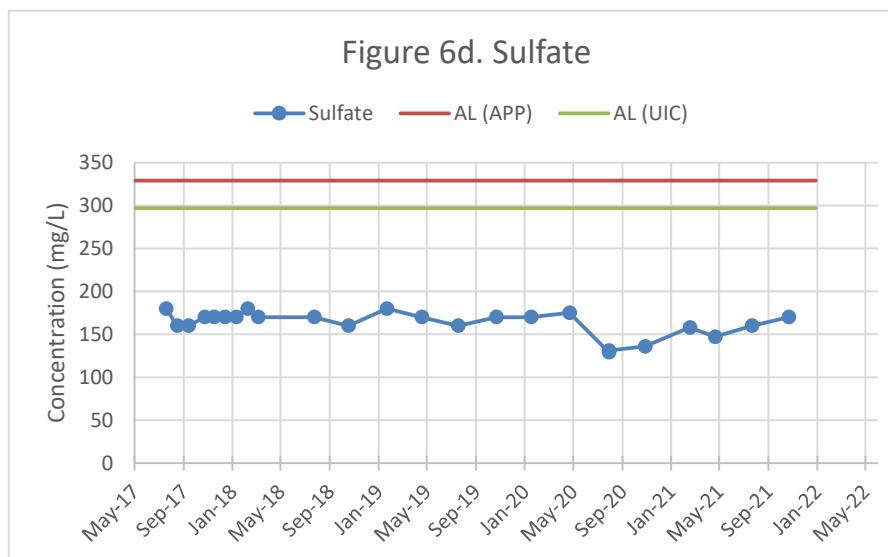
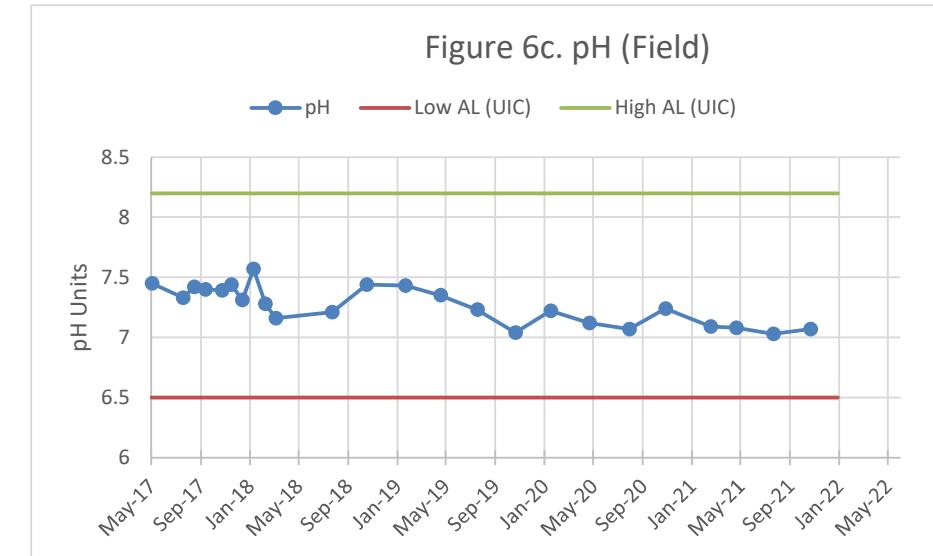
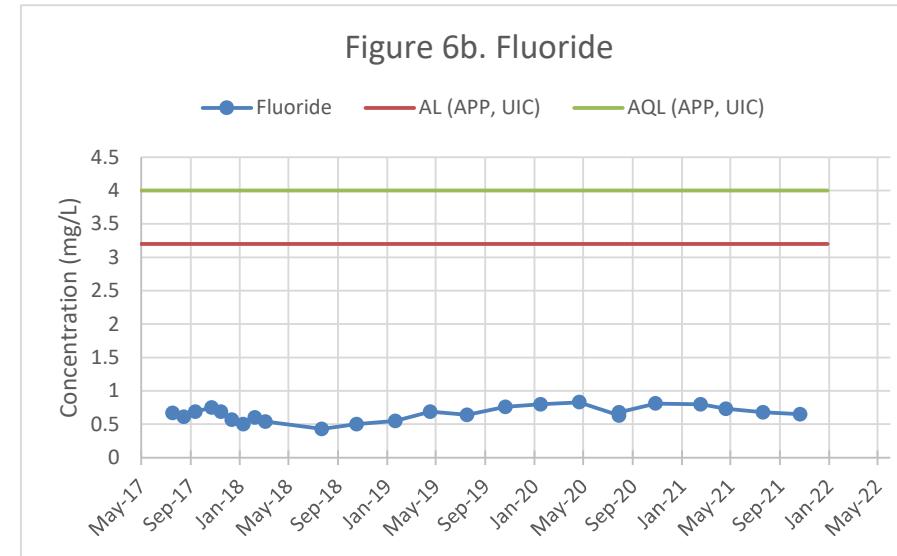
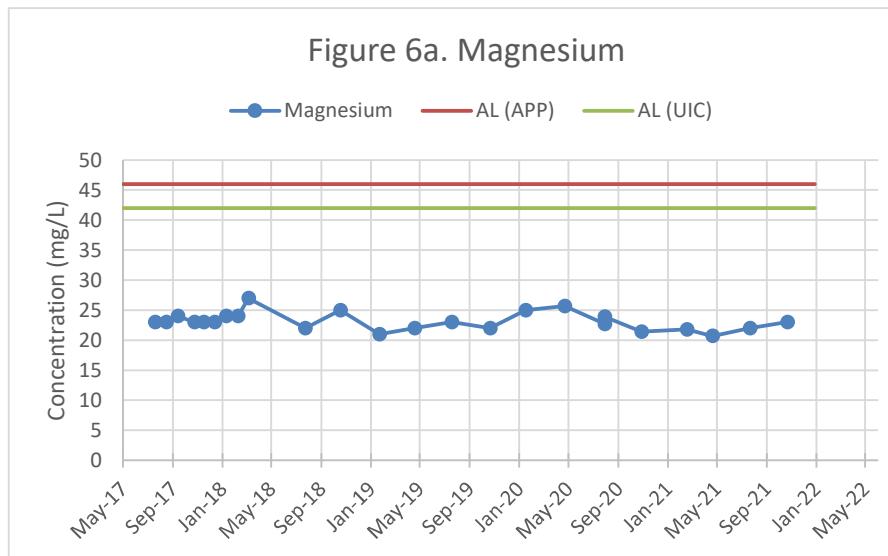
AL = Alert level

AQL = Aquifer Quality Limit

APP = APP No. P-101704

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M54-LBF QUARTERLY CONCENTRATION GRAPHS



Notes:

Historical outliers removed from graphs for visual representation, but are maintained in the dataset.

AL = Alert level

AQL = Aquifer Quality Limit

APP = APP No. P-101704

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M54-O QUARTERLY CONCENTRATION GRAPHS

Figure 7a. Magnesium

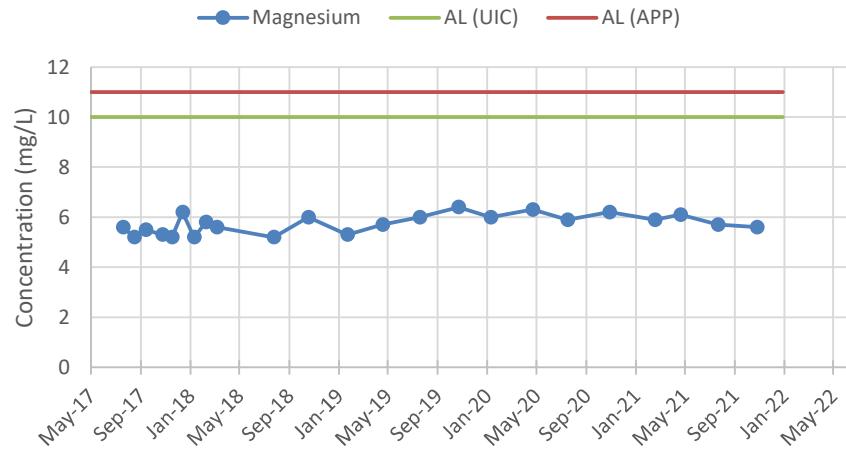


Figure 7b. Fluoride

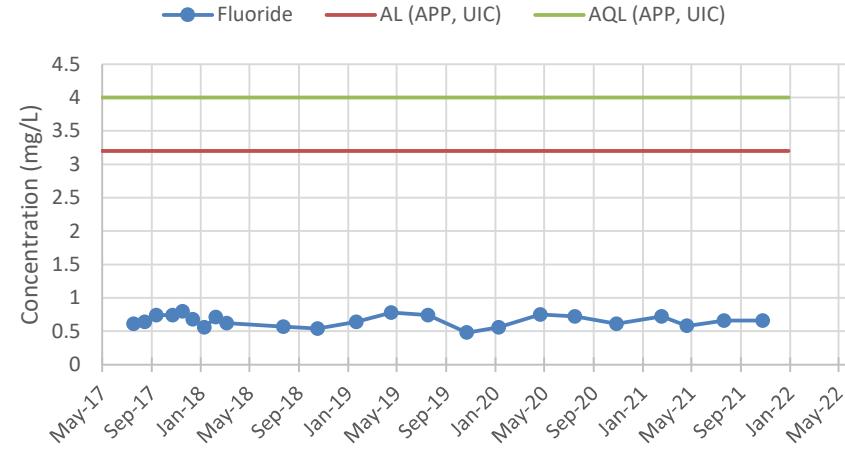


Figure 7c. pH (Field)

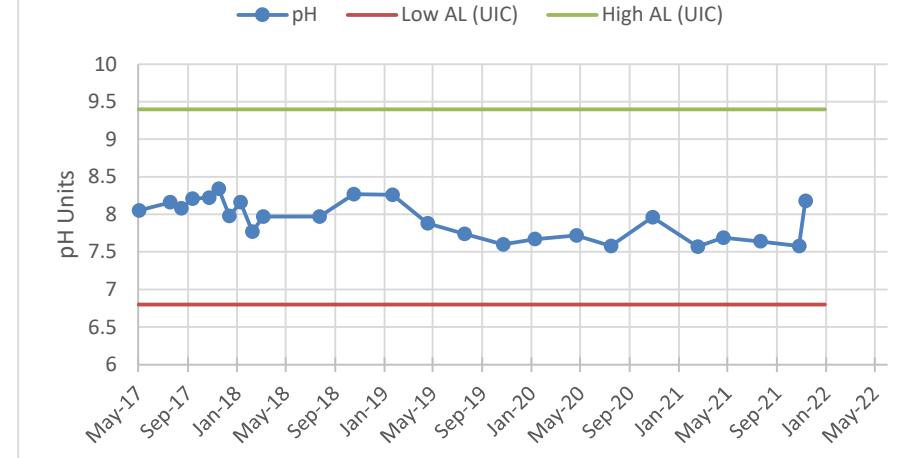


Figure 7d. Sulfate

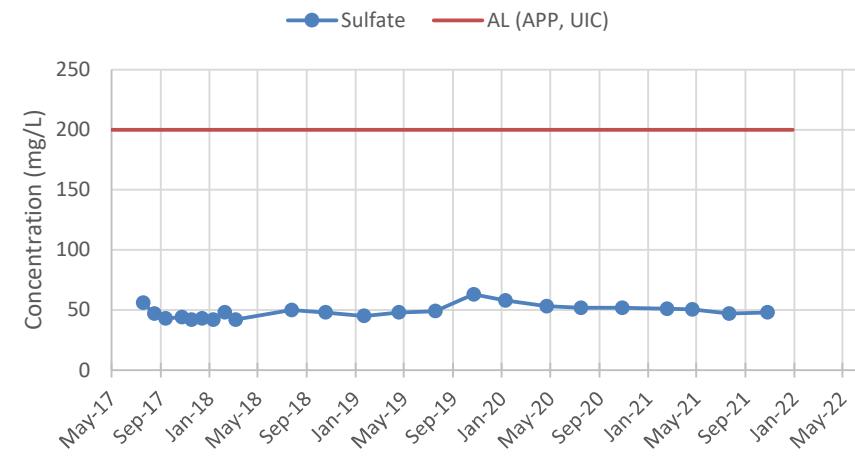


Figure 7e. Total Dissolved Solids

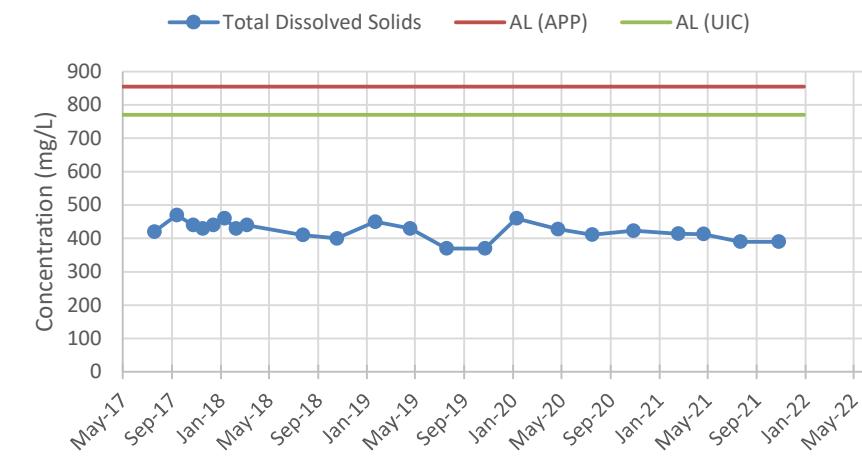
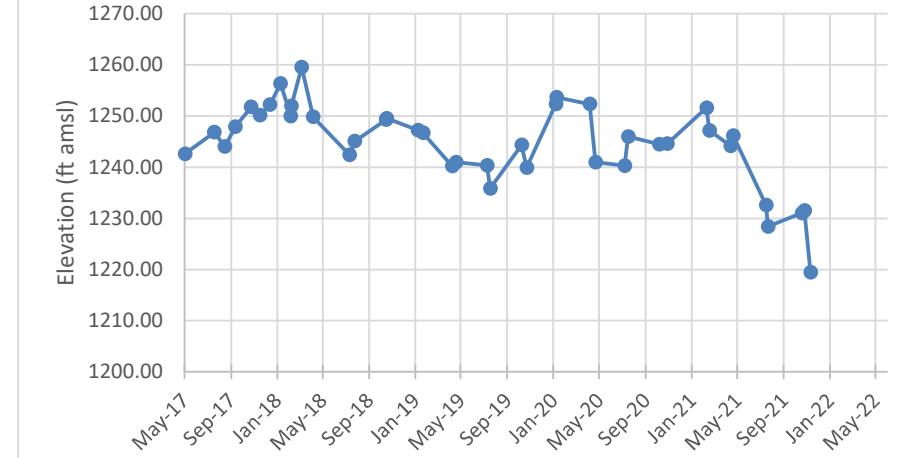


Figure 7f. Groundwater Elevation



Notes:

AL = Alert level

AQL = Aquifer Quality Limit

APP = APP No. P-101704

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M55-UBF QUARTERLY CONCENTRATION GRAPHS

Figure 8a. Magnesium

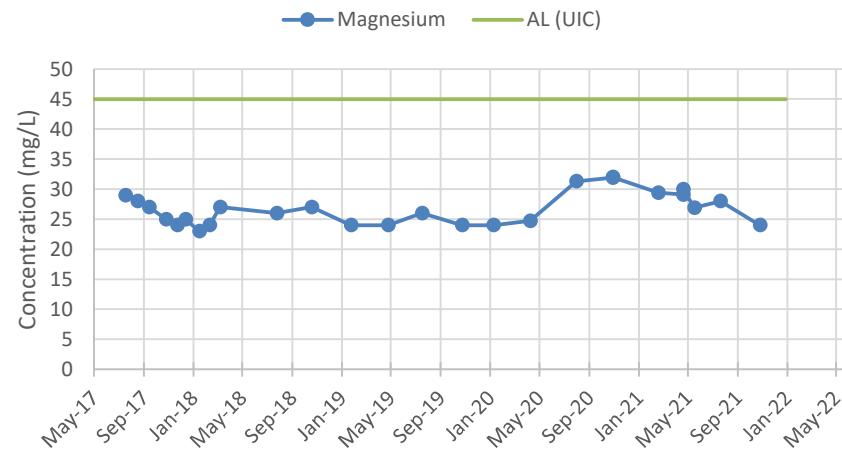


Figure 8b. Fluoride

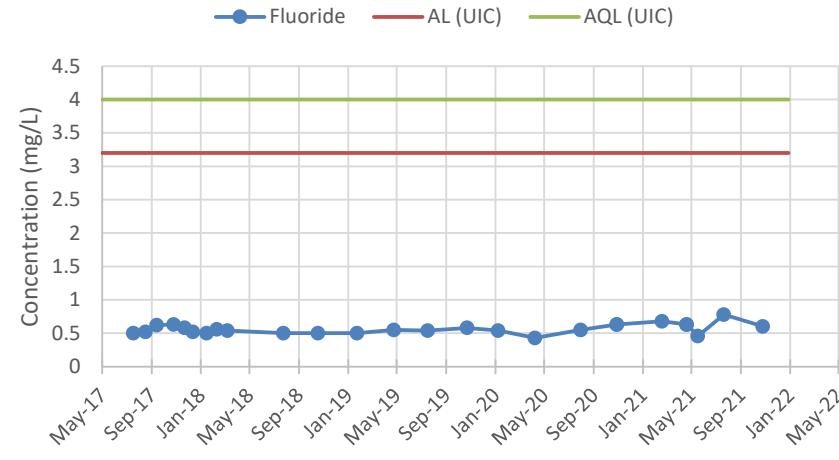


Figure 8c. pH (Field)

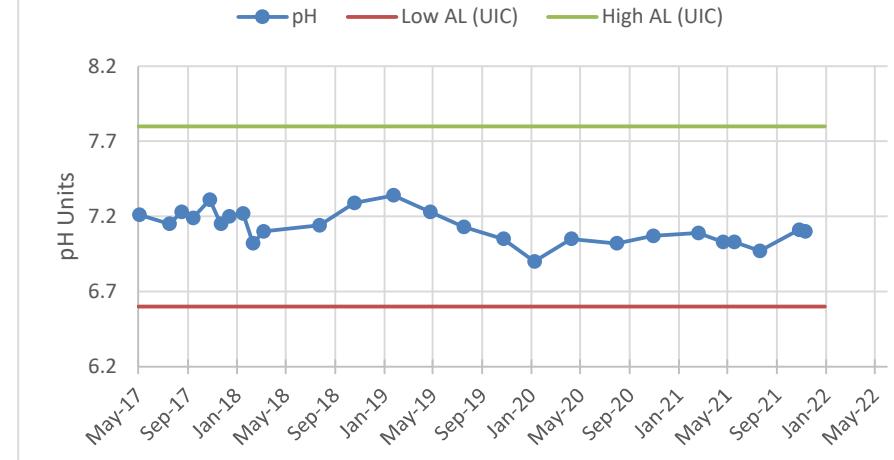


Figure 8d. Sulfate

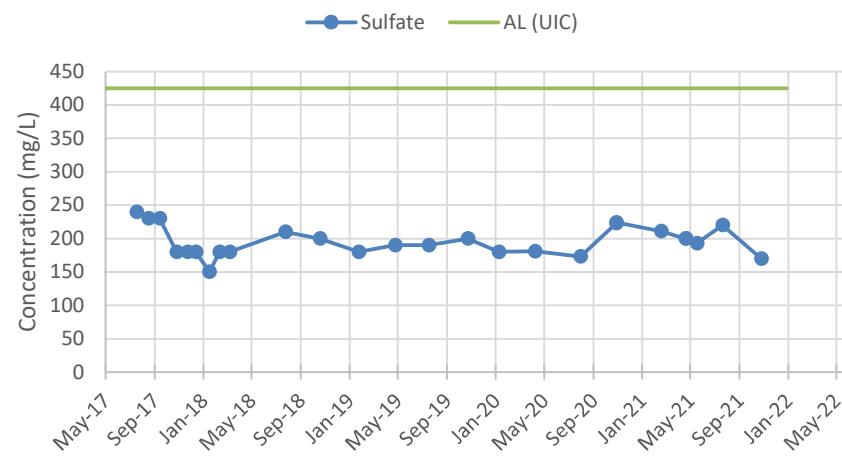


Figure 8e. Total Dissolved Solids

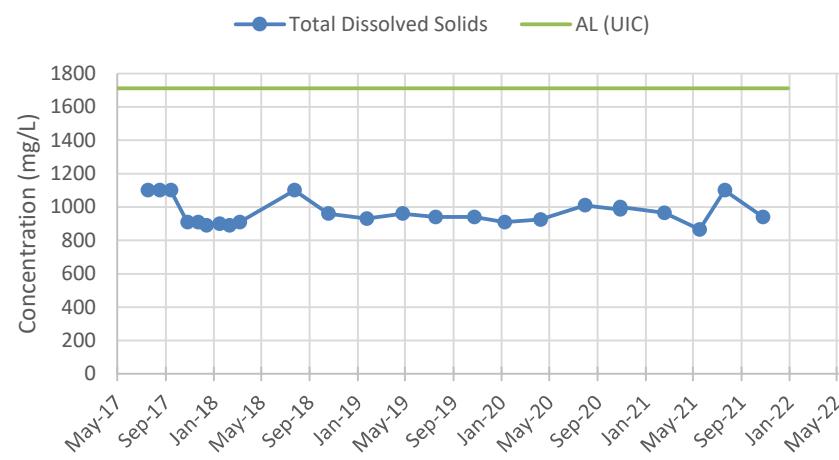
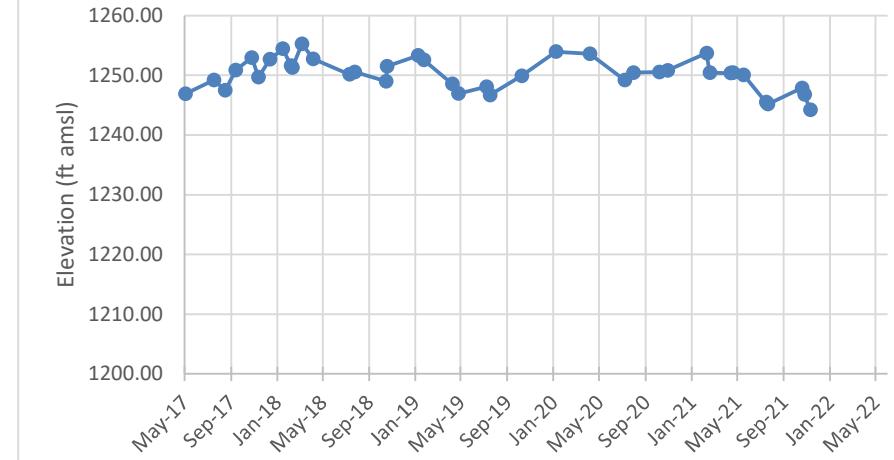


Figure 8f. Groundwater Elevation



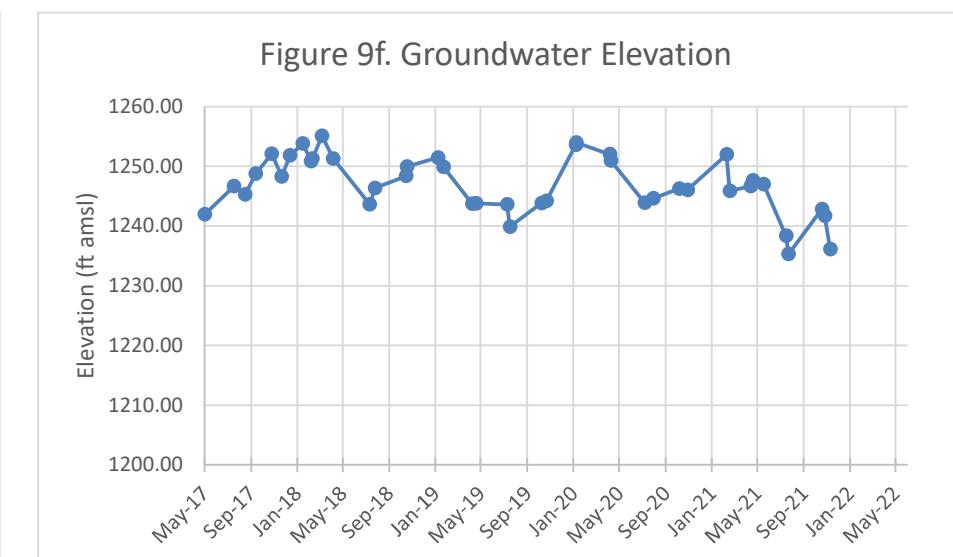
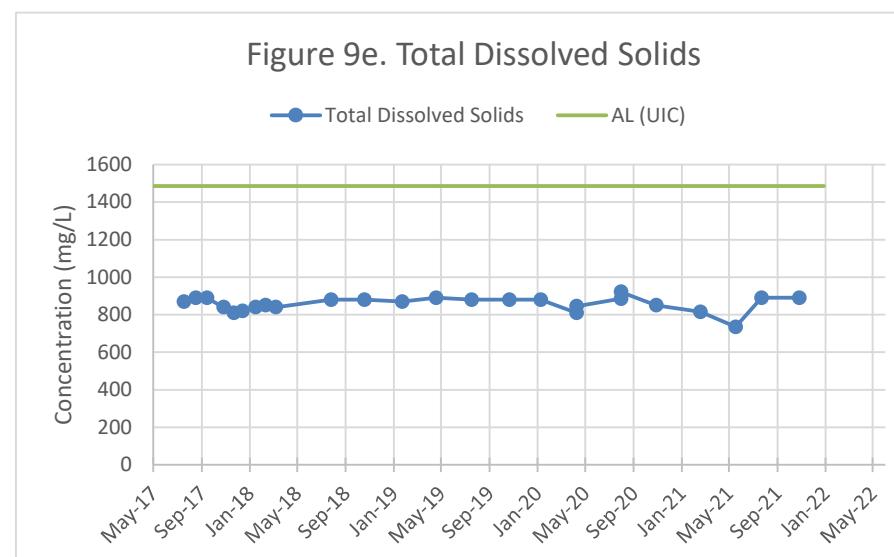
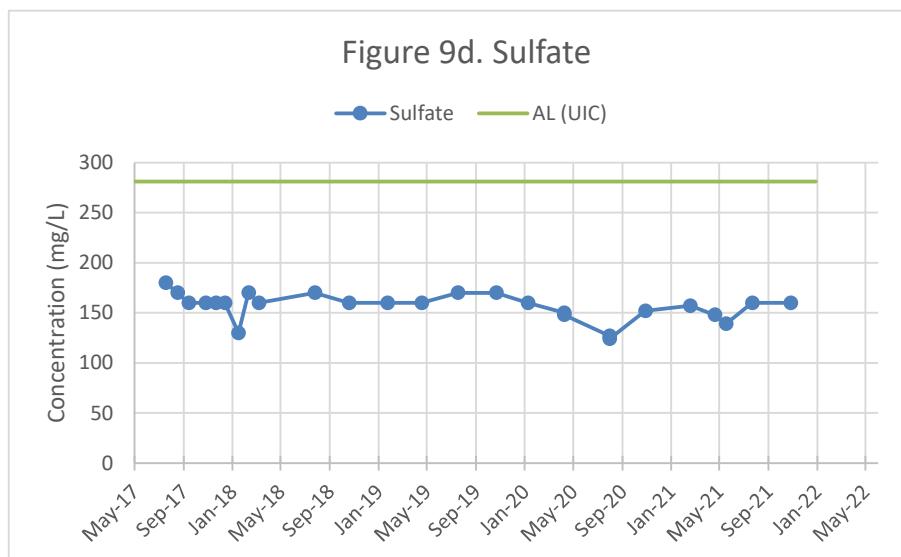
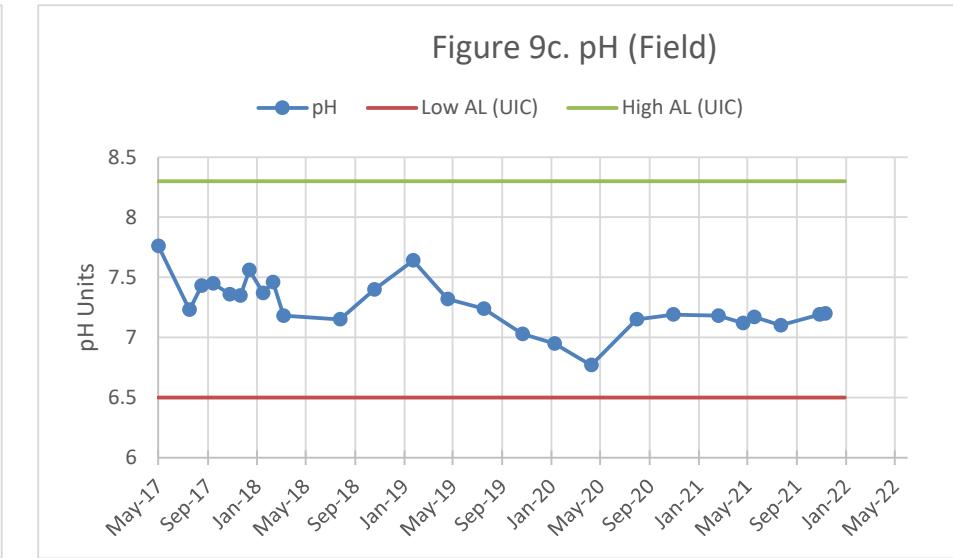
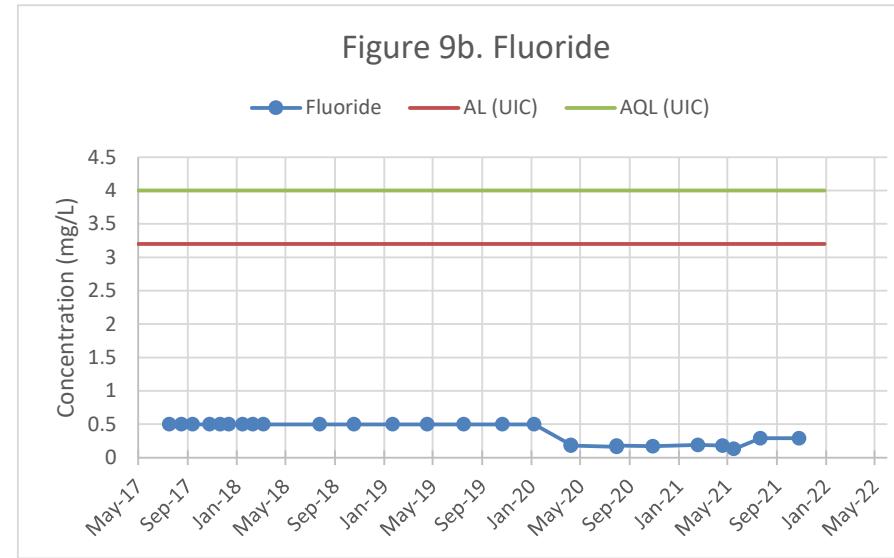
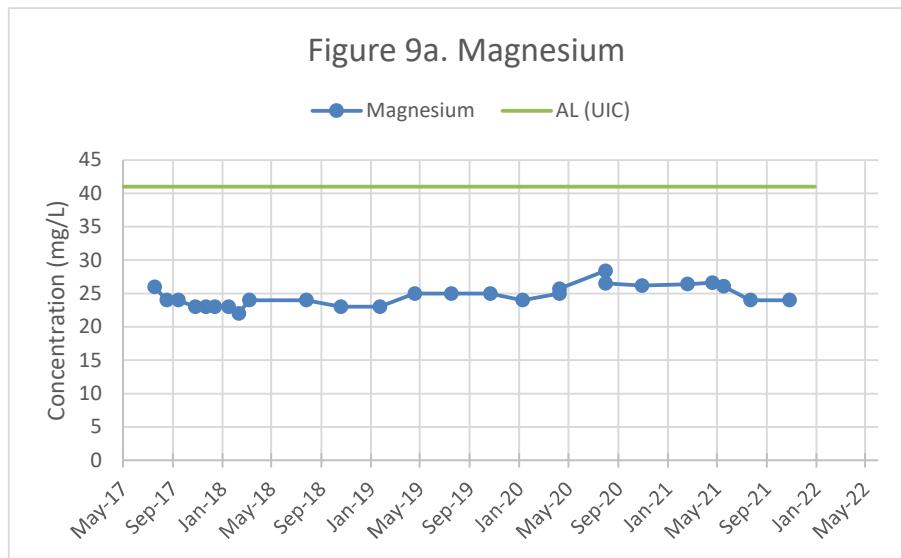
Notes:

AL = Alert level

AQL = Aquifer Quality Limit

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M56-LBF QUARTERLY CONCENTRATION GRAPHS



Notes:

AL = Alert level

AQL = Aquifer Quality Limit

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M57-O QUARTERLY CONCENTRATION GRAPHS

Figure 10a. Magnesium

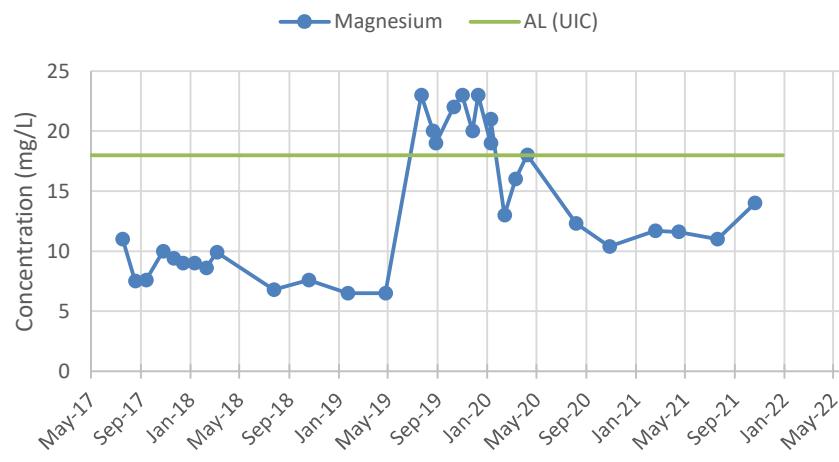


Figure 10b. Fluoride

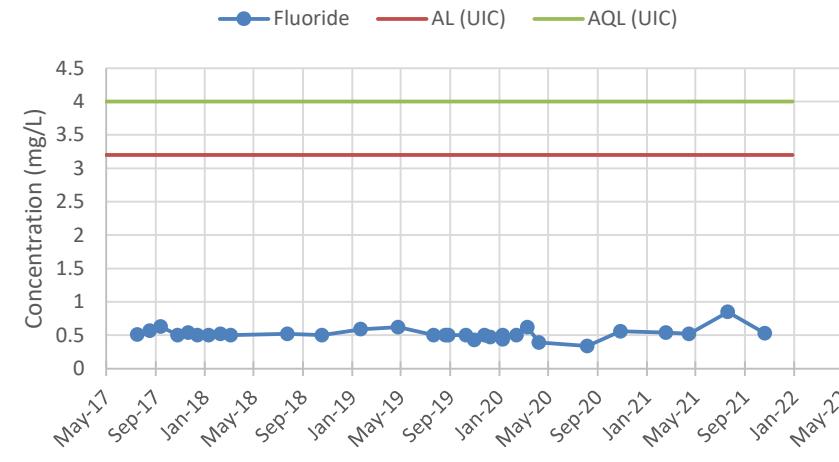


Figure 10c. pH (Field)

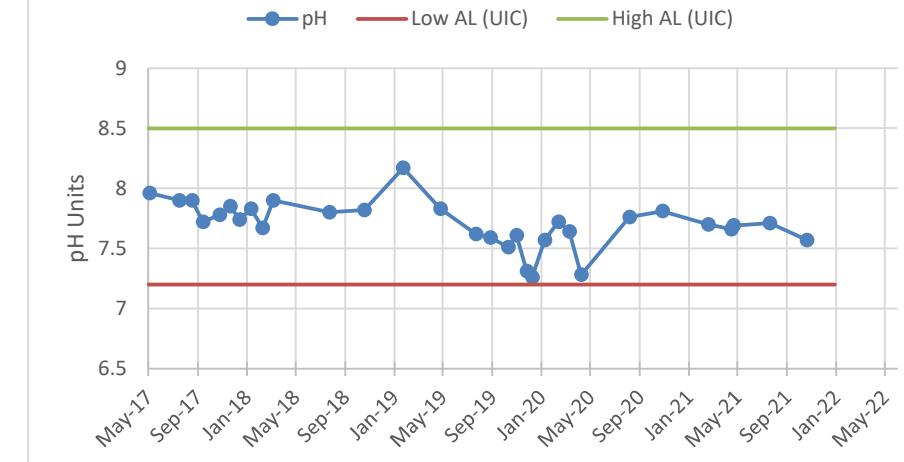


Figure 10d. Sulfate

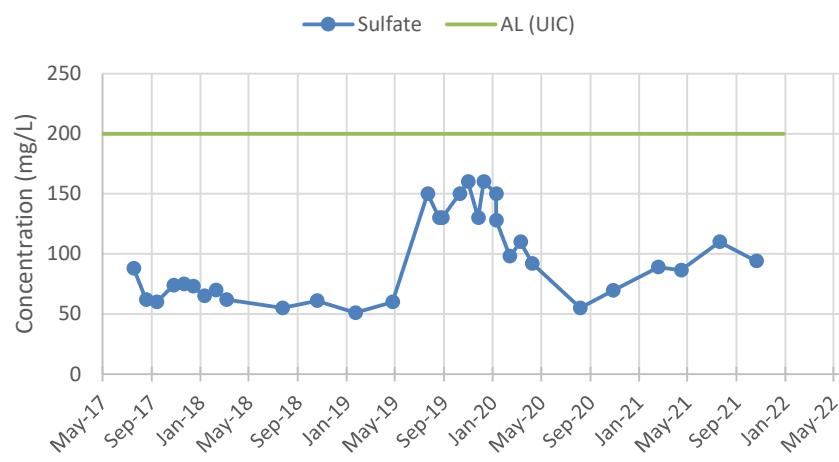


Figure 10e. Total Dissolved Solids

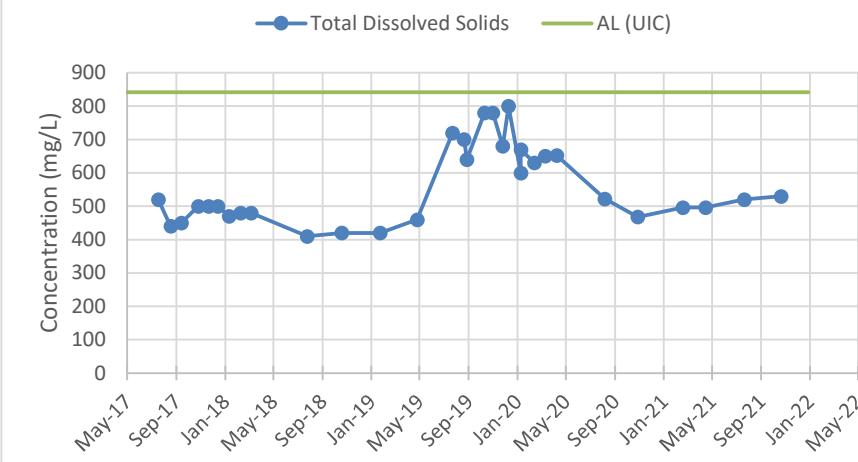
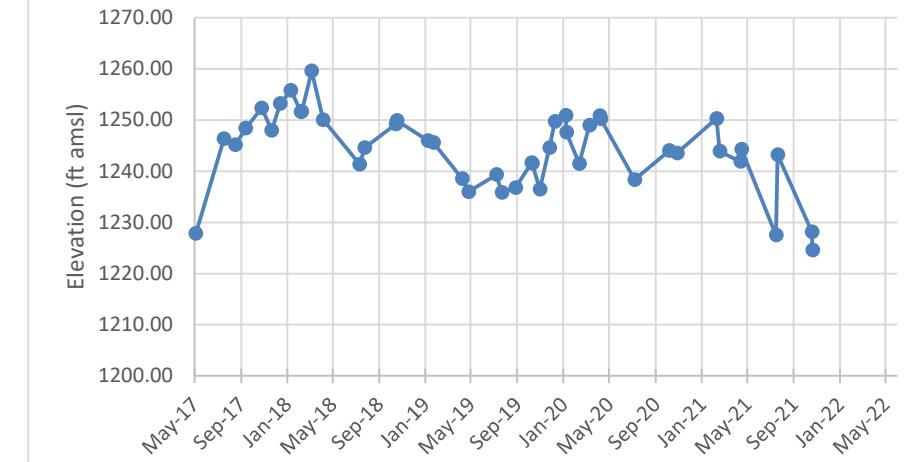


Figure 10f. Groundwater Elevation



Notes:

AL = Alert level

AQL = Aquifer Quality Limit

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M57R-O QUARTERLY CONCENTRATION GRAPHS

Figure 11a. Magnesium

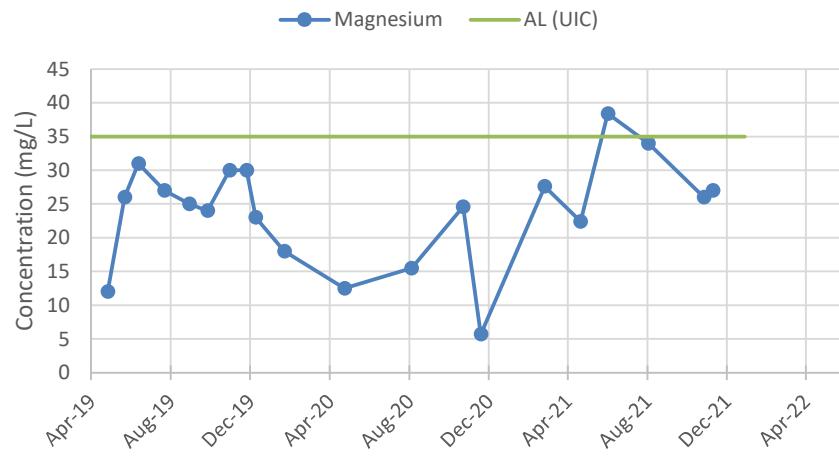


Figure 11b. Fluoride

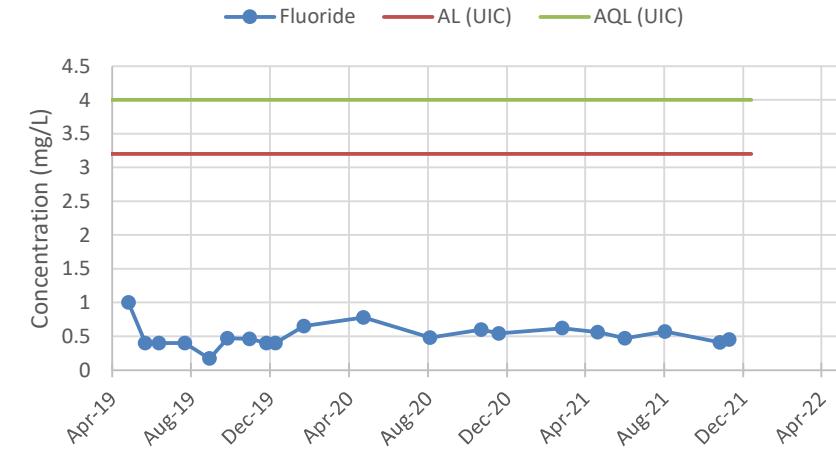


Figure 11c. pH (Field)

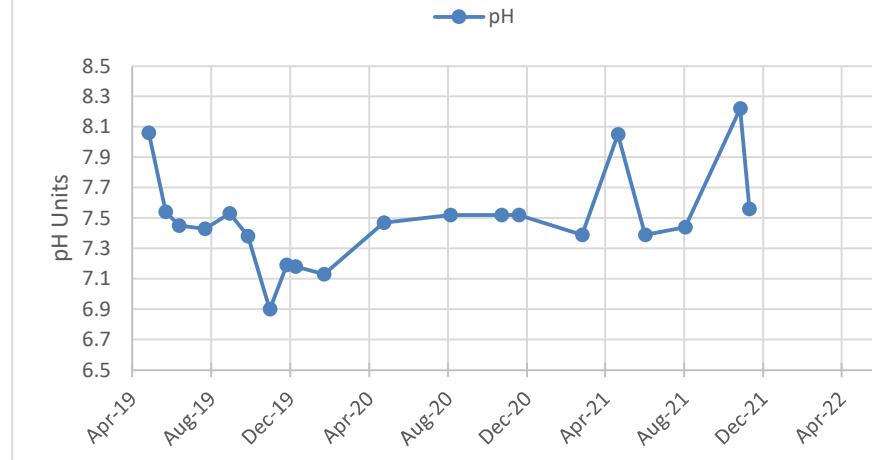


Figure 11d. Sulfate

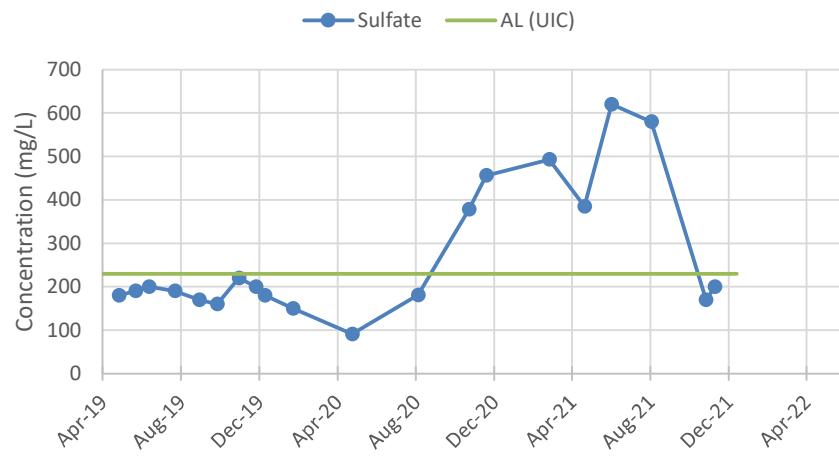


Figure 11e. Total Dissolved Solids

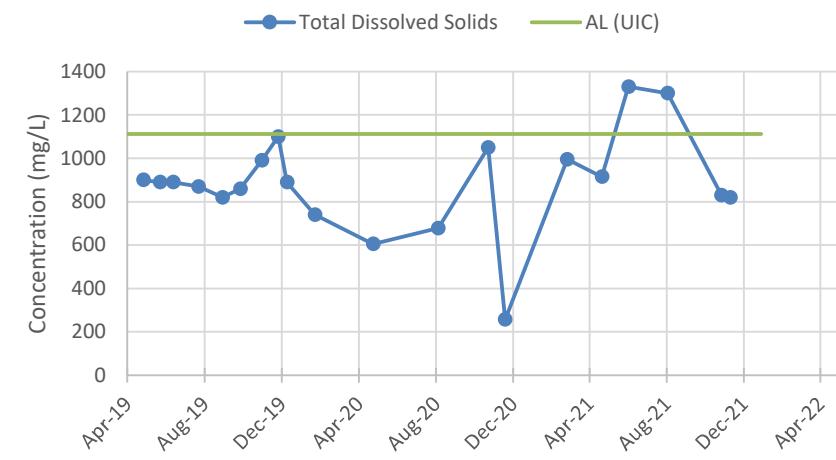
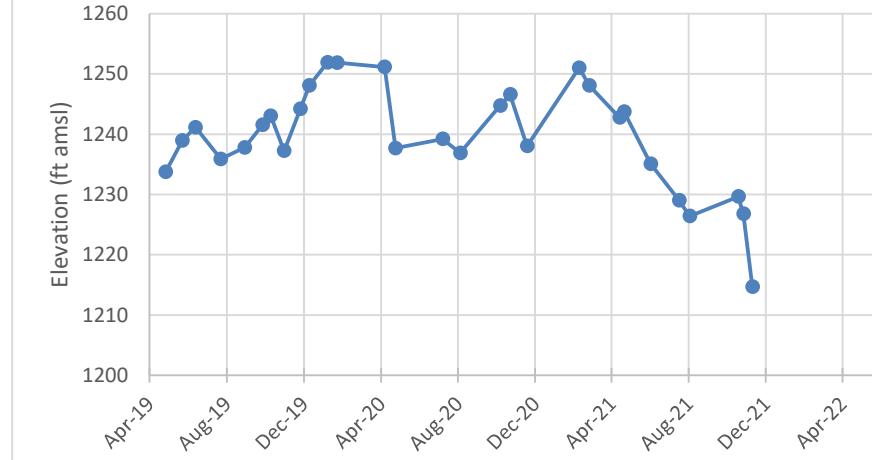


Figure 11f. Groundwater Elevation



Notes:

AL = Alert level

AQL = Aquifer Quality Limit

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M58-O QUARTERLY CONCENTRATION GRAPHS

Figure 12a. Magnesium

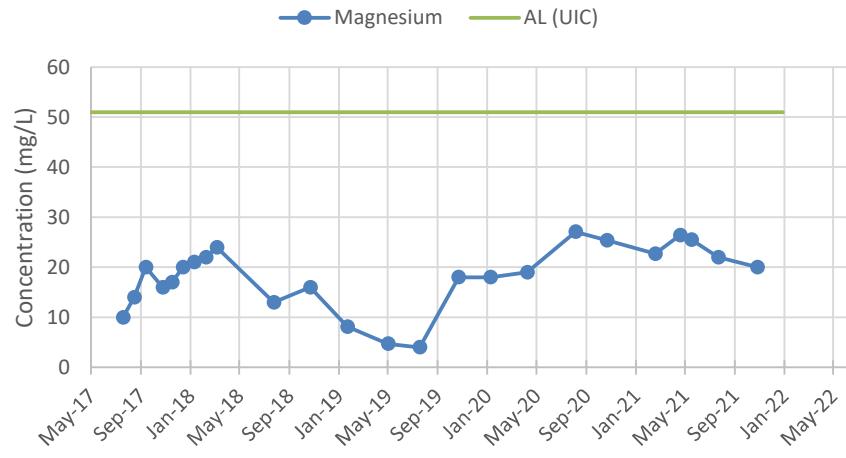


Figure 12b. Fluoride

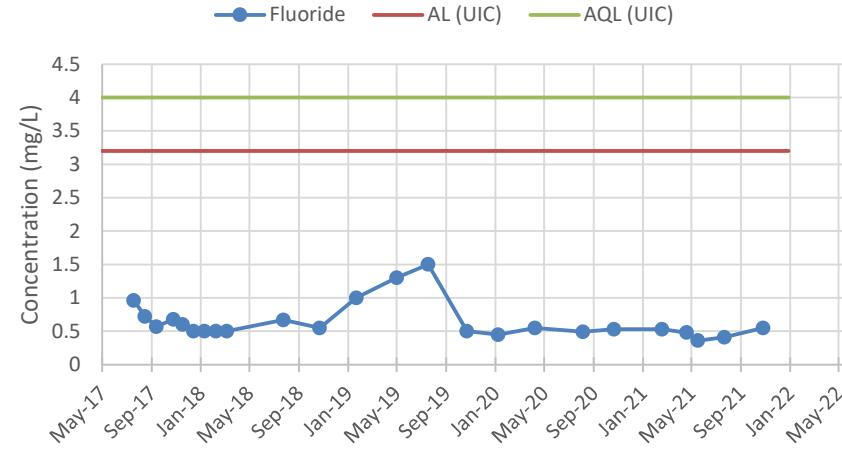


Figure 12c. pH (Field)

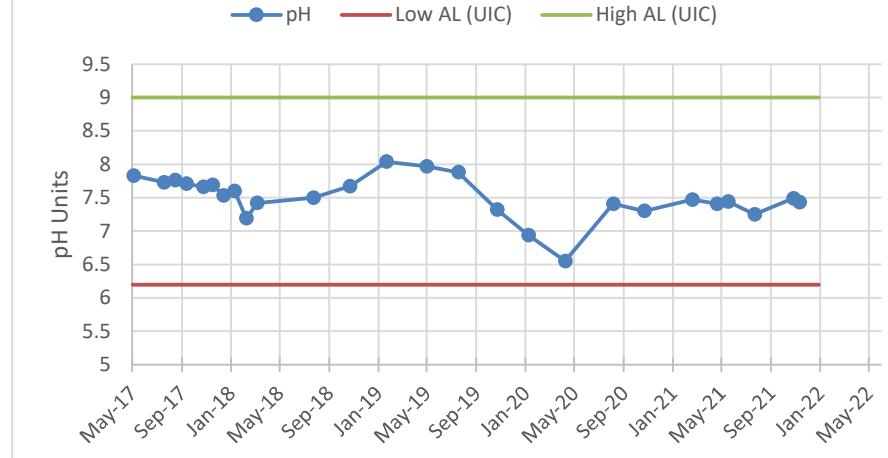


Figure 12d. Sulfate

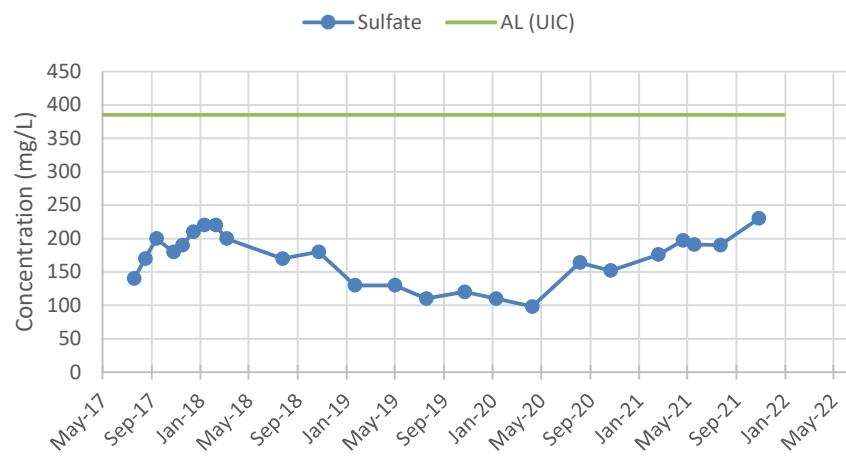


Figure 12e. Total Dissolved Solids

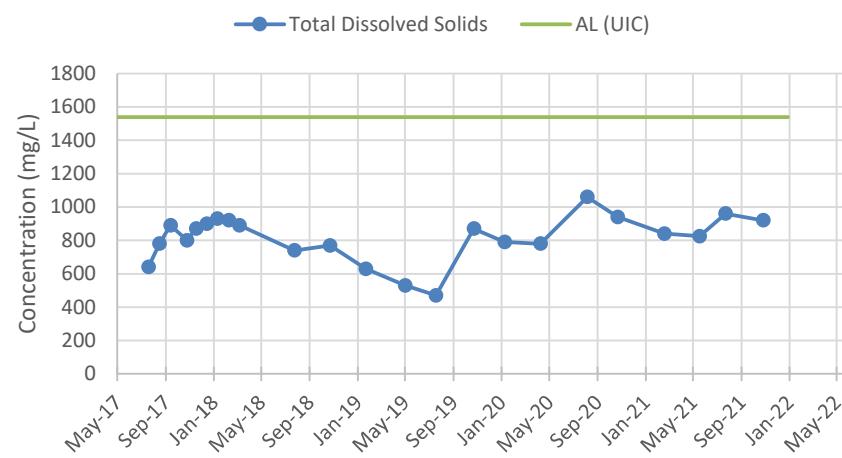
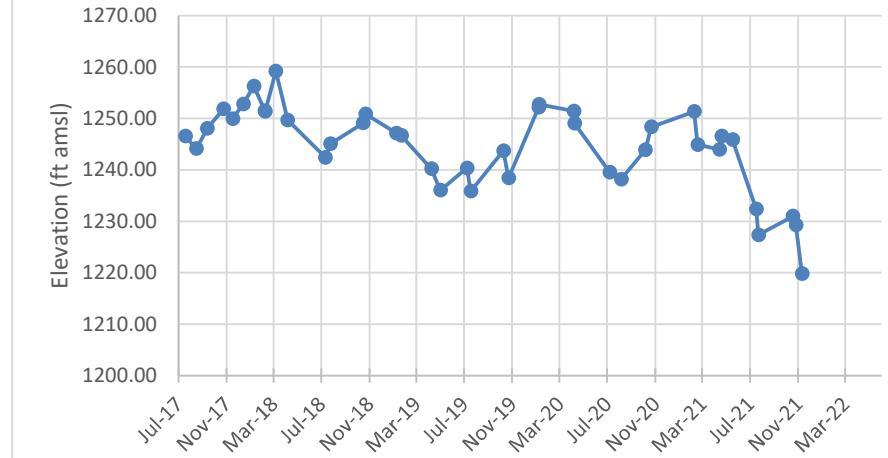


Figure 12f. Groundwater Elevation



Notes:

AL = Alert level

AQL = Aquifer Quality Limit

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M59-O QUARTERLY CONCENTRATION GRAPHS

Figure 13a. Magnesium

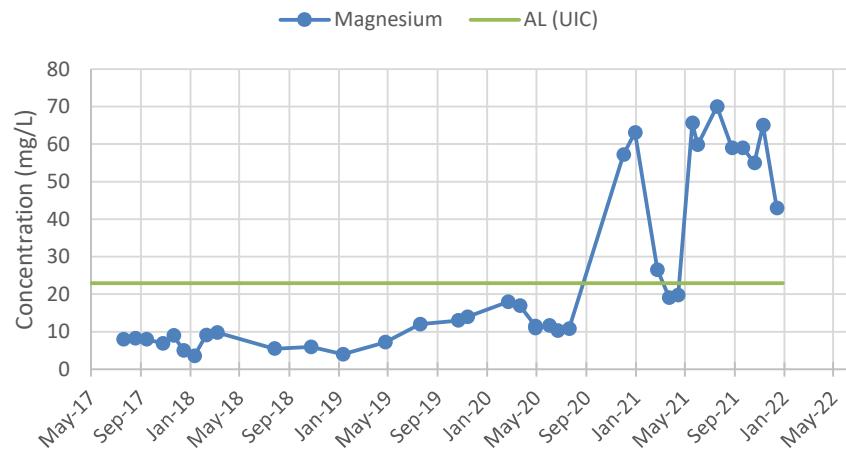


Figure 13b. Fluoride

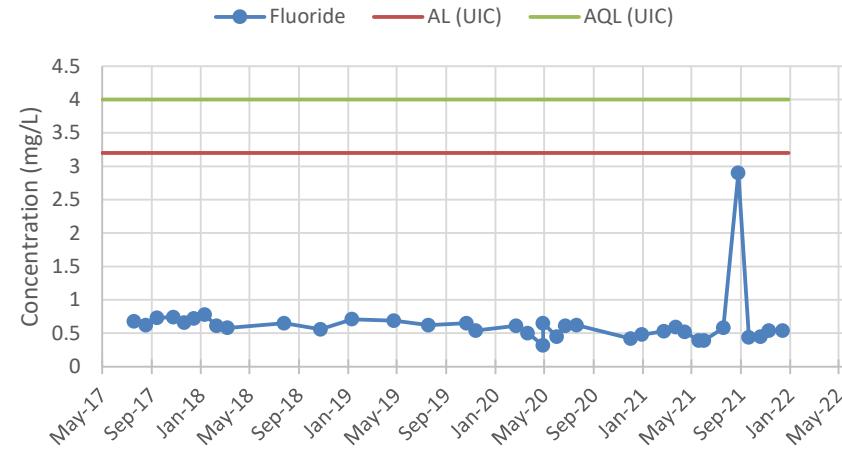


Figure 13c. pH (Field)

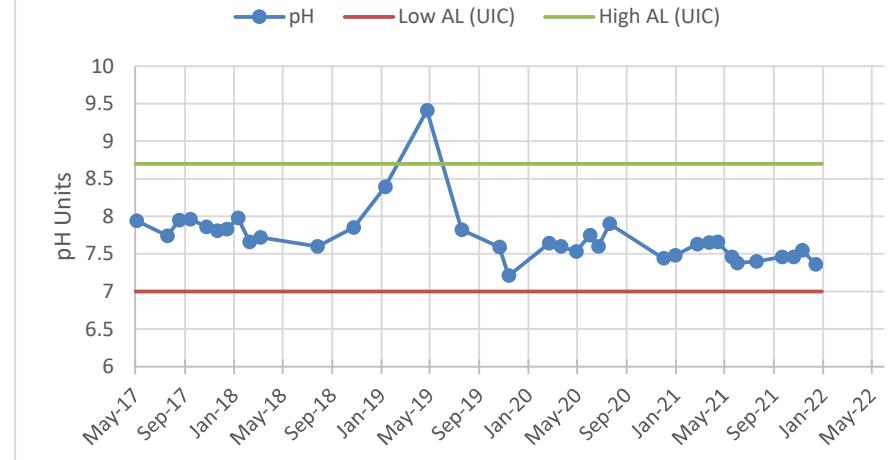


Figure 13d. Sulfate

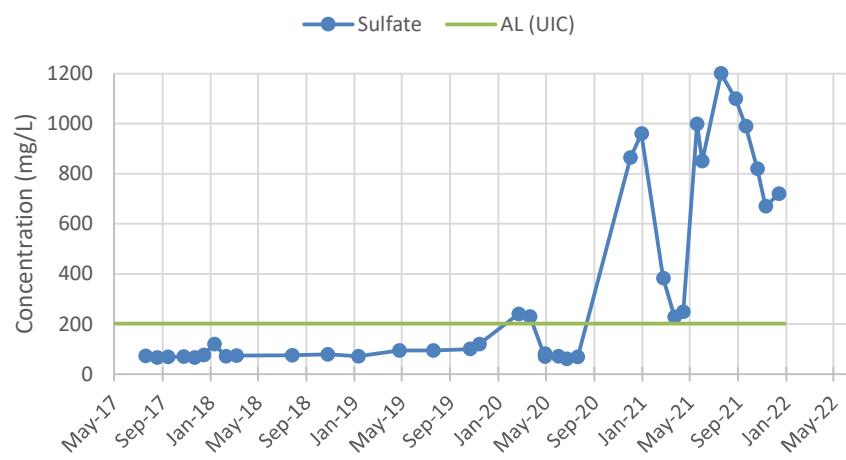


Figure 13e. Total Dissolved Solids

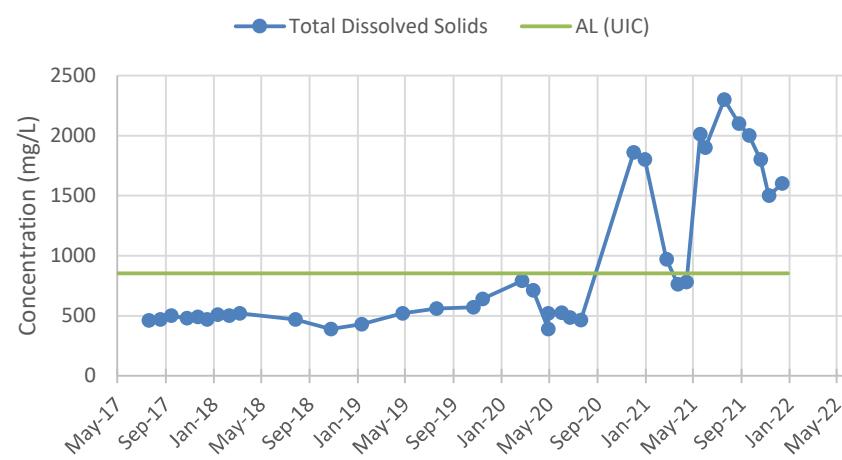
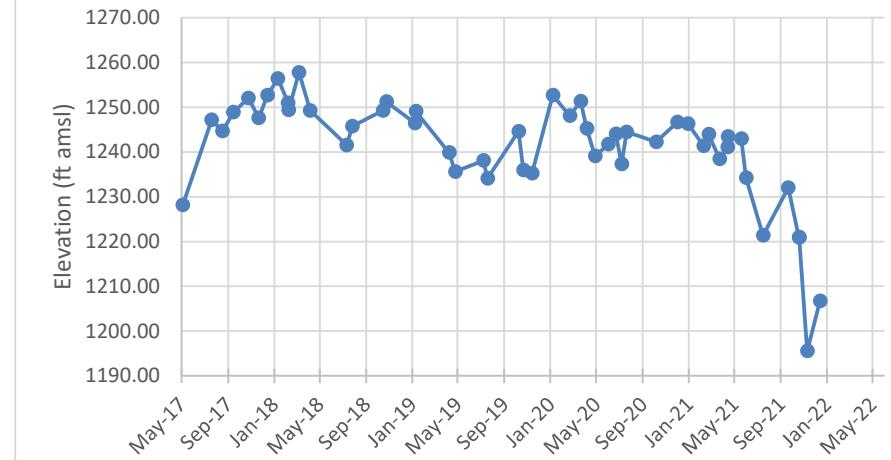


Figure 13f. Groundwater Elevation



Notes:

AL = Alert level

AQL = Aquifer Quality Limit

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M60-O QUARTERLY CONCENTRATION GRAPHS

Figure 14a. Magnesium

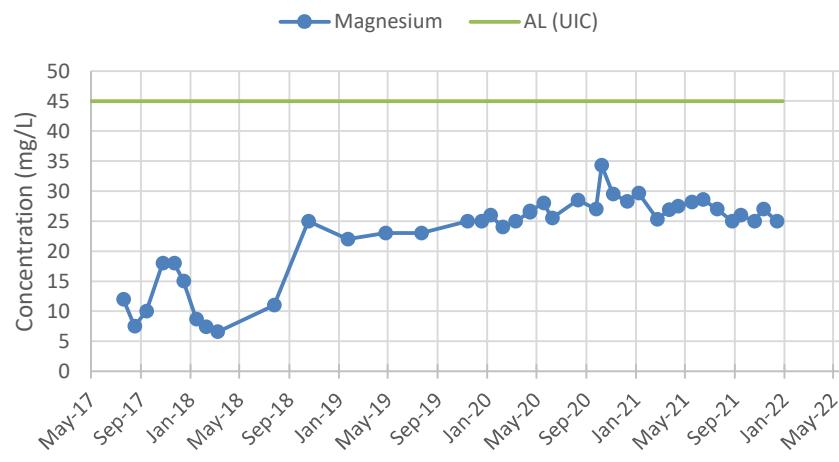


Figure 14b. Fluoride

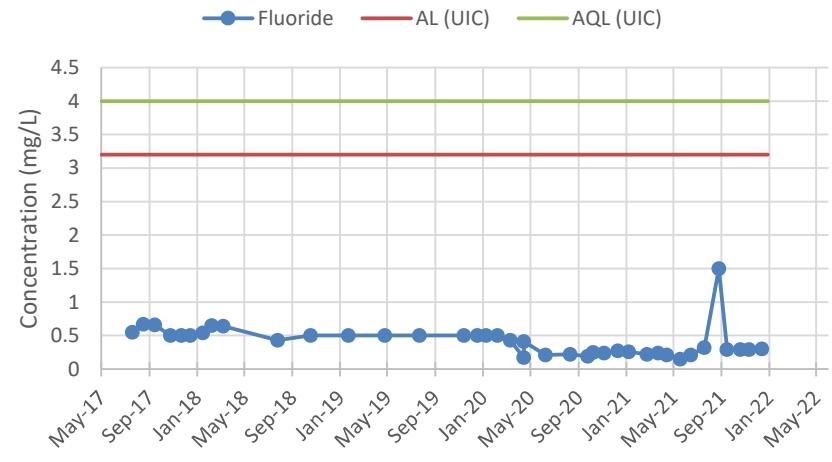


Figure 14c. pH (Field)

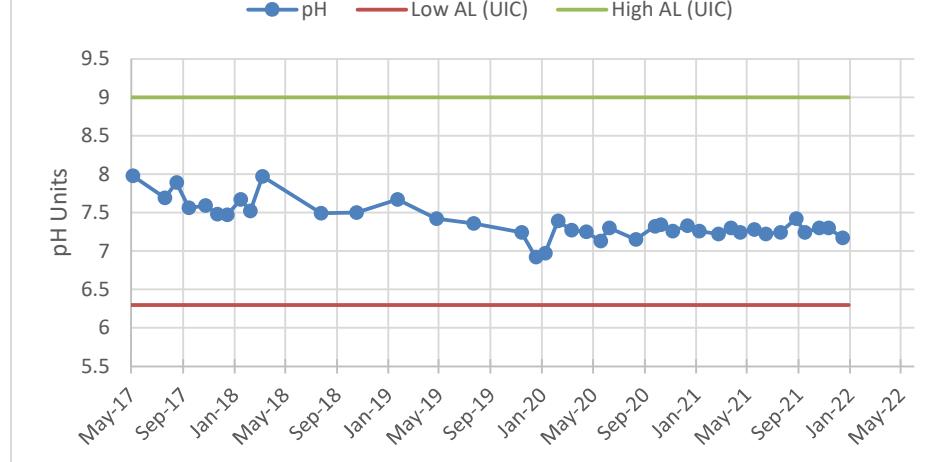


Figure 14d. Sulfate

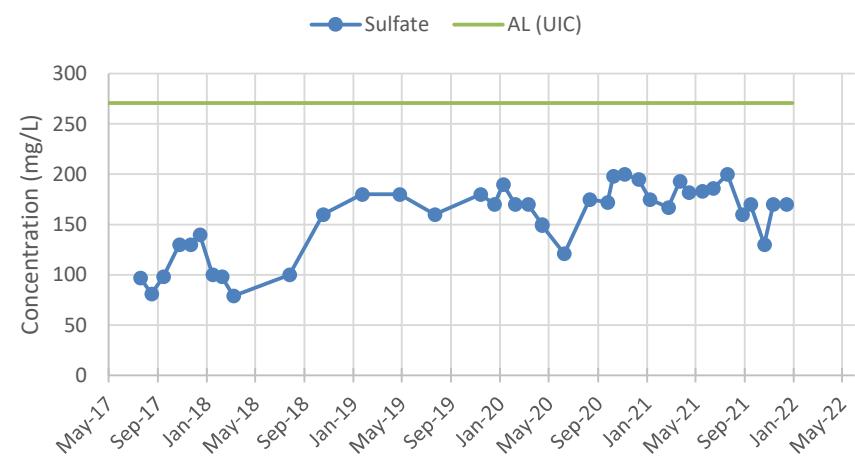


Figure 14e. Total Dissolved Solids

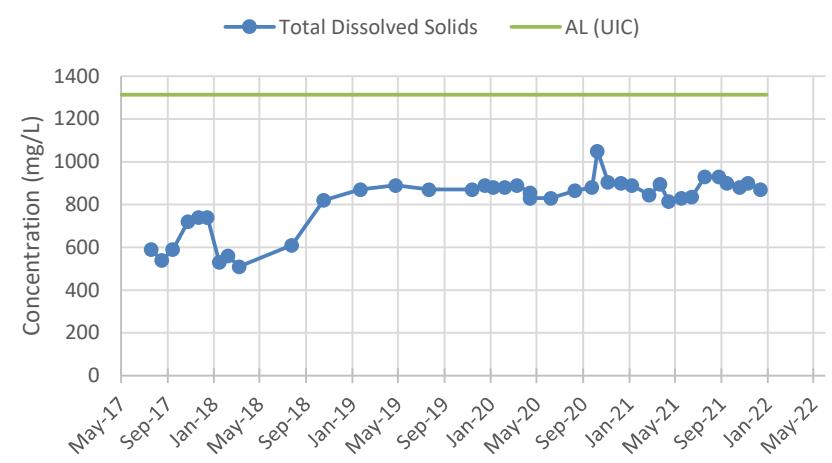
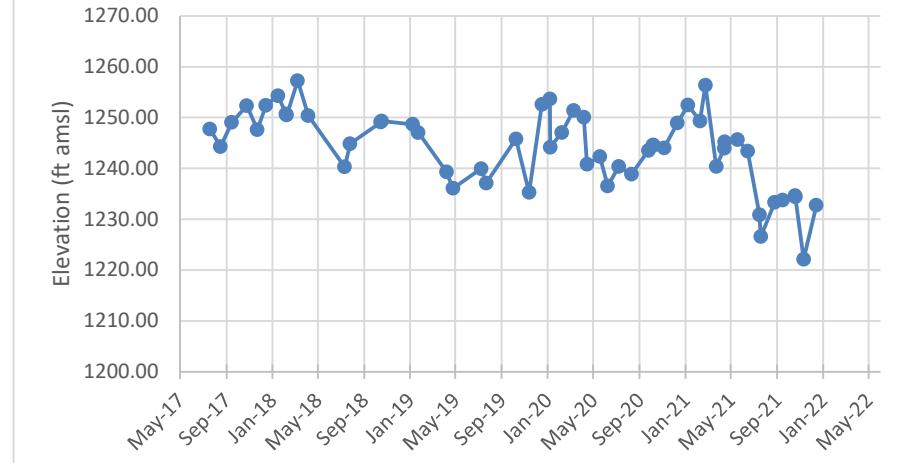


Figure 14f. Groundwater Elevation



Notes:

AL = Alert level

AQL = Aquifer Quality Limit

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M61-LBF QUARTERLY CONCENTRATION GRAPHS

Figure 15a. Magnesium

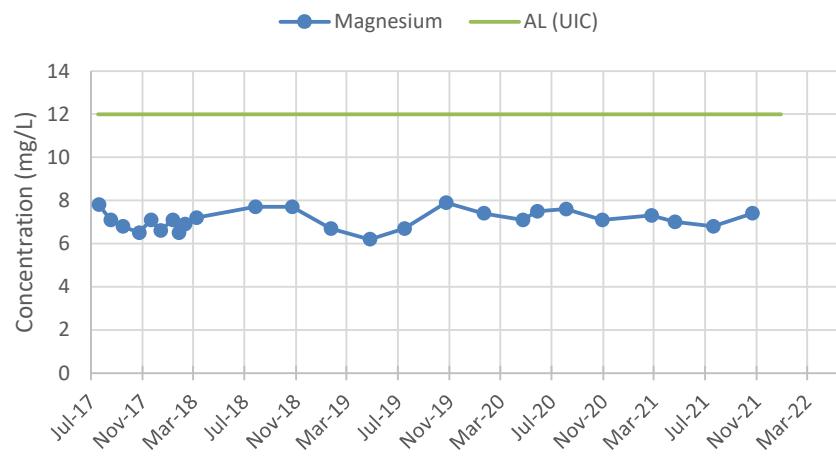


Figure 15b. Fluoride

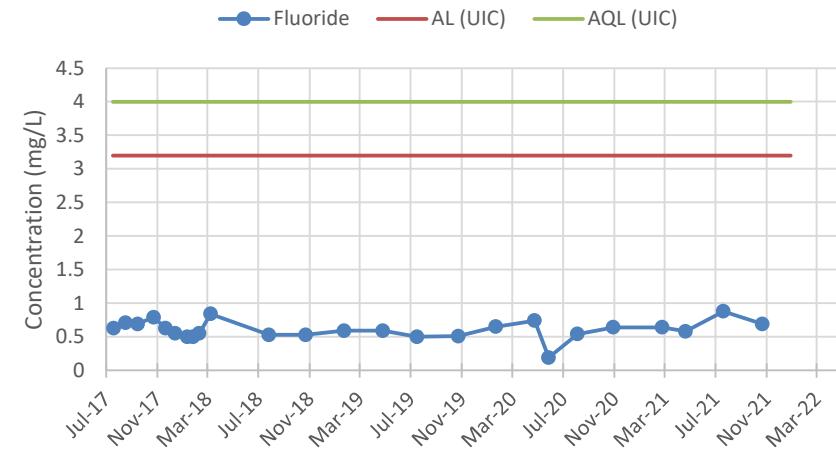


Figure 15c. pH (Field)

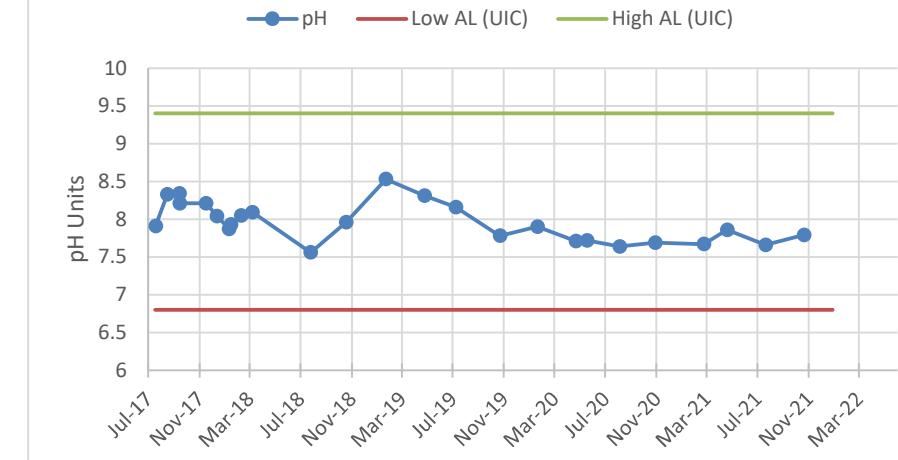


Figure 15d. Sulfate

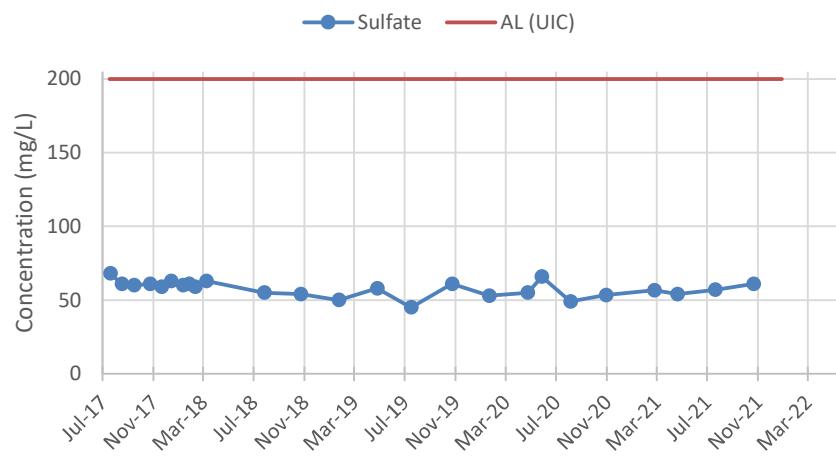


Figure 15e. Total Dissolved Solids

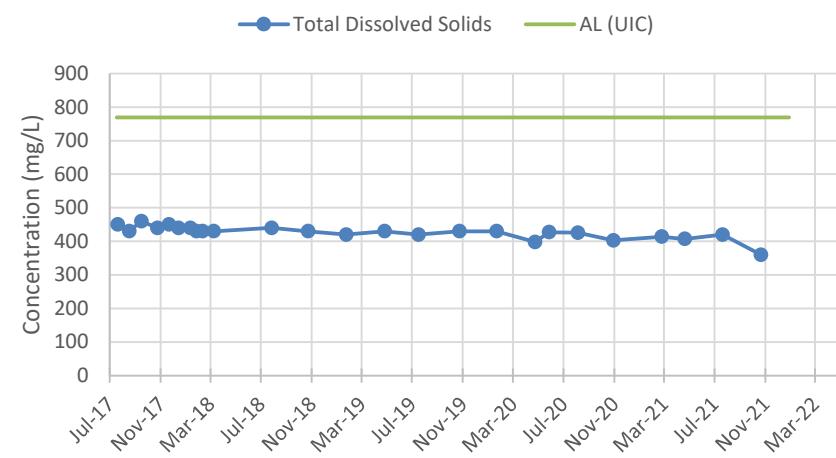
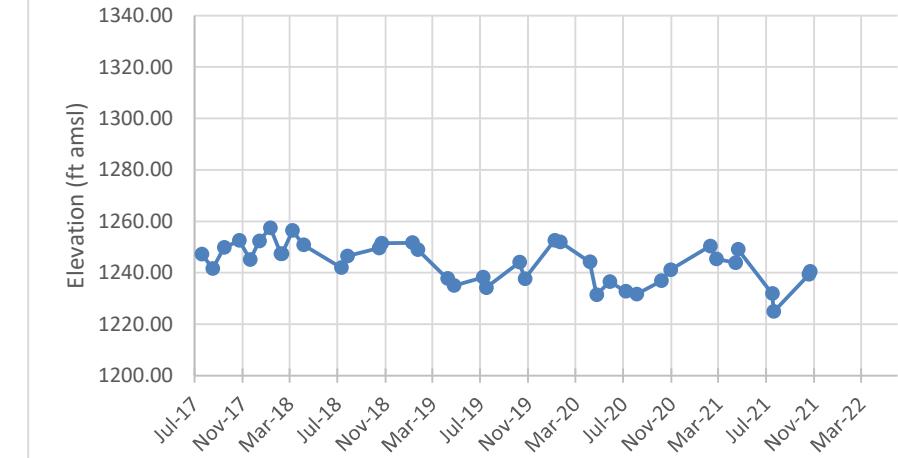


Figure 15f. Groundwater Elevation



Notes:

AL = Alert level

AQL = Aquifer Quality Limit

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

MW-01-LBF QUARTERLY CONCENTRATION GRAPHS

Figure 16a. Magnesium

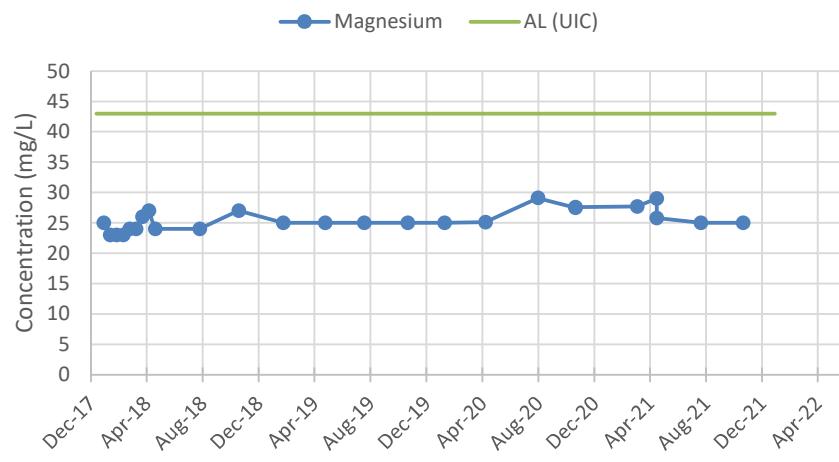


Figure 16b. Fluoride

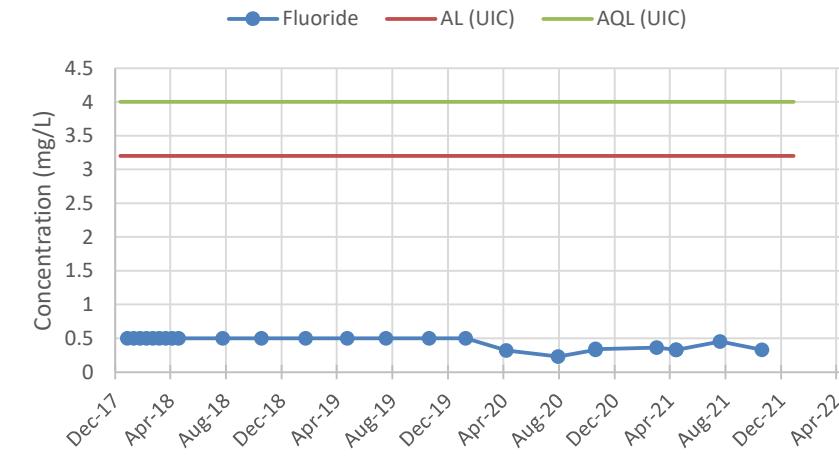


Figure 16c. pH (Field)

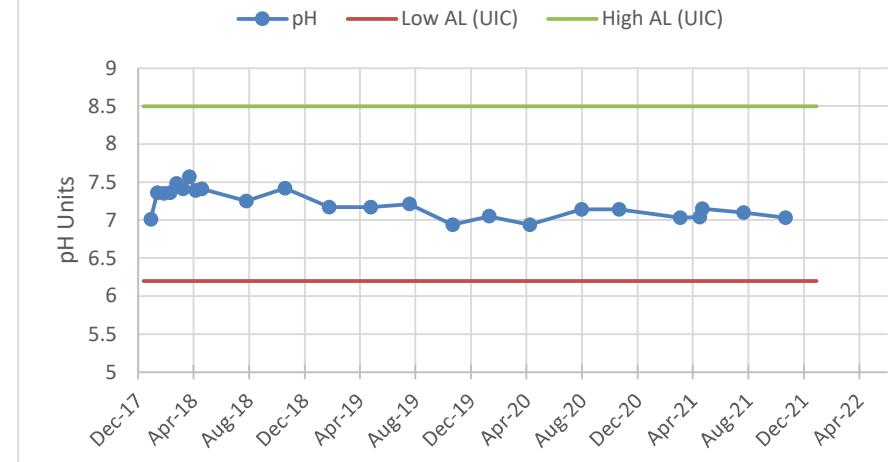


Figure 16d. Sulfate

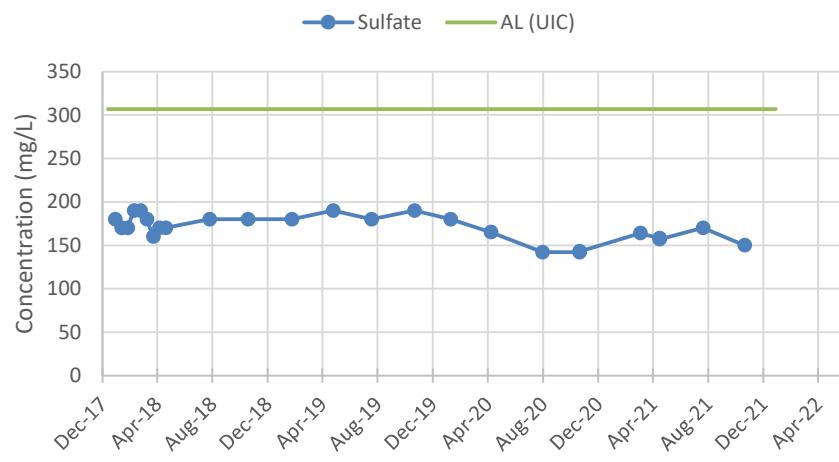


Figure 16e. Total Dissolved Solids

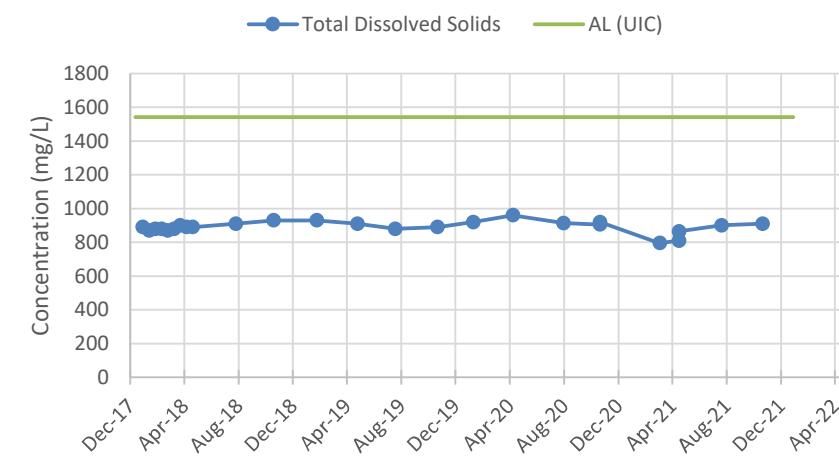
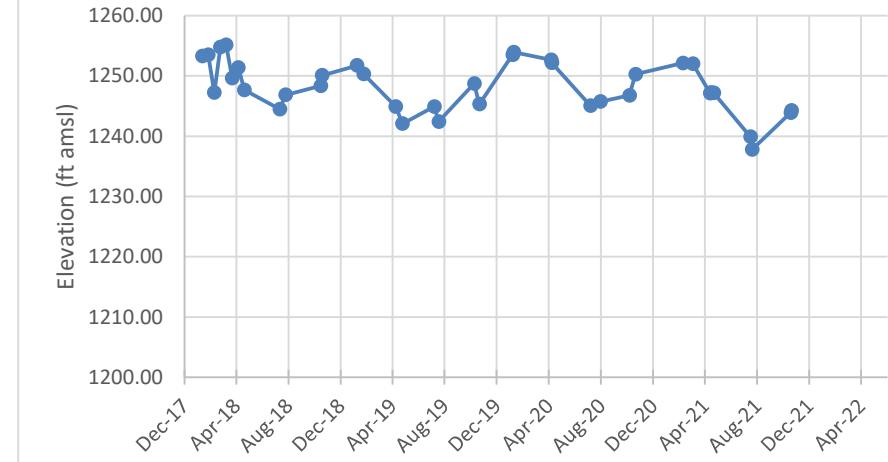


Figure 16f. Groundwater Elevation



MW-01-O QUARTERLY CONCENTRATION GRAPHS

Figure 17a. Magnesium

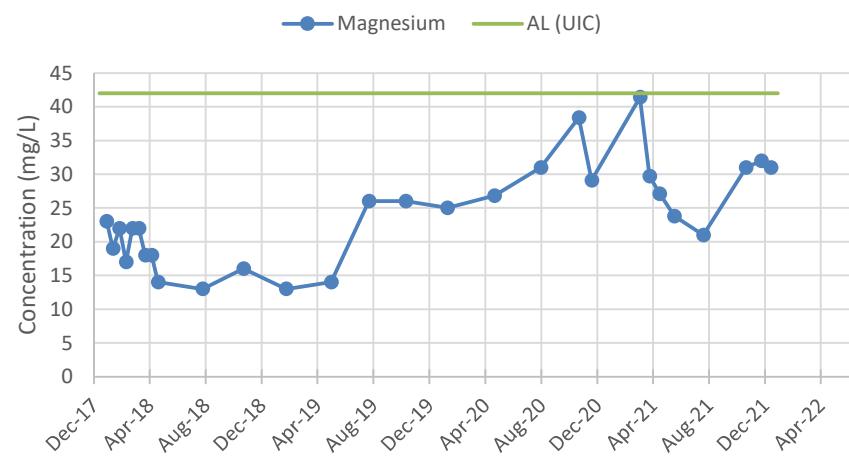


Figure 17b. Fluoride

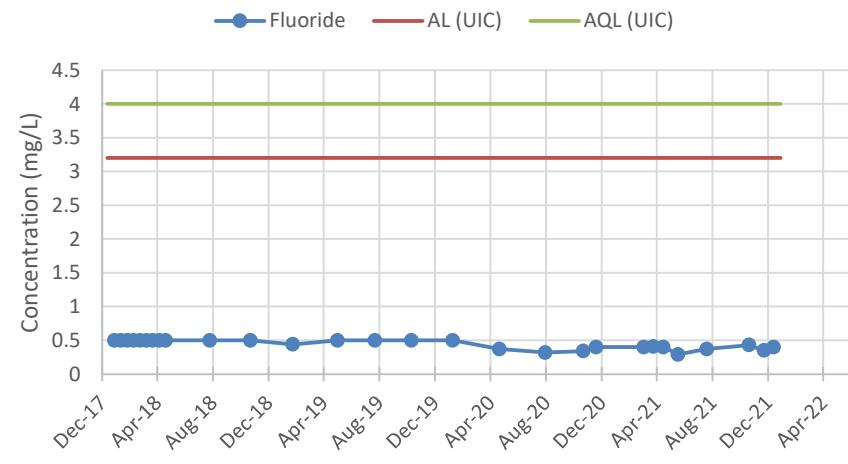


Figure 17c. pH (Field)

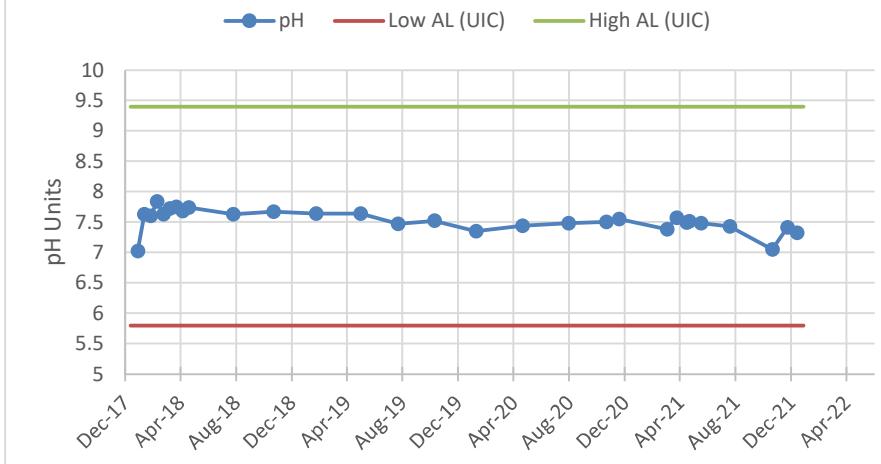
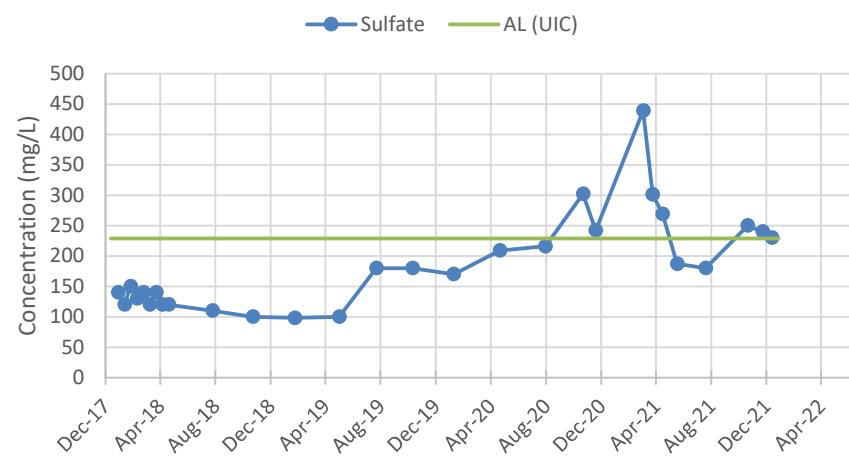


Figure 17d. Sulfate



ATTACHMENT 6B

Well Details and Water Level Elevations

TABLE 1
UIC MONITORING WELL DETAILS
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Well ID	Well Type	ADWR #	Total Well Depth (ft bgs)	Latitude	Longitude	Screened Interval (ft bgs)	Aquifer Unit
M14-GL	POC	55-549172	838	33°03'4.0"N	111°26'15.77"W	778-838	LBFU
M15-GU	POC	55-547813	594	33°03'4.04"N	111°26'16.40"W	554-594	LBFU
M22-O	POC	55-555831	1,130	33°03'4.53"N	111°26'15.76"W	932-1,130	OXIDE
M23-UBF	POC	55-555824	250	33°03'4.51"N	111°26'16.50"W	210-250	UBFU
M54-LBF	POC	55-226792	629	33°03'7.07"N	111°26'9.29"W	310-629	LBFU
M54-O	POC	55-226798	1,199	33°03'6.91"N	111°26'9.22"W	668-1,199	OXIDE
M52-UBF	POC	55-226788	274	33°03'11.03"N	111°25'24.66"W	200-274	UBFU
M55-UBF	Monitor	55-226797	261	33°03'1.99"N	111°26'6.18"W	240-261	UBFU
M56-LBF	Monitor	55-226795	340	33°03'2.21"N	111°26'6.44"W	320-340	LBFU
M57-O	Monitor	55-226790	1,200	33°03'1.88"N	111°26'8.39"W	523-1,200	OXIDE
M58-O	Monitor	55-226794	1,200	33°03'5.20"N	111°26'4.94"W	594-1,200	OXIDE
M59-O	Monitor	55-226791	1,200	33°03'1.58"N	111°26'2.25"W	534-1,200	OXIDE
M60-O	Monitor	55-226796	1,201	33°02'58.70"N	111°26'5.78"W	444-1,201	OXIDE
M61-LBF	Monitor	55-226799	630	33°03'0.85"N	111°25'58.92"W	429-630	LBFU
MW-01-LBF	Operational	55-226789	440	33°03'02.9442"N	111°26'07.1046"W	330-440	LBFU
MW-01-O	Operational	55-226793	1,200	33°03'03.045"N	111°26'06.9786"W	500-1,200	OXIDE
New Wells Constructed or Replaced							
M57R-O	Monitor	55-229751	1,200	33°03'0.31"N	111°26'8.16"W	550-1,200	OXIDE

Notes:

ADWR = Arizona Department of Water Resources

APP = Aquifer Protection Permit

ft bgs = feet below ground surface

LBFU = lower basin fill unit

POC = point of compliance

UBFU = upper basin fill unit

UIC = Underground Injection Control

TABLE 2
SUMMARY OF QUARTERLY WATER LEVELS
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Location ID	Date	Depth to Water (feet)	Description of Measuring Point	Elevation of Measuring Point (feet amsl)	Water Level Elevation (feet amsl)
M14-GL	10/18/2021	236.94	TOC	1477.12	1240.18
M14-GL	11/08/2021	NM	TOC	1477.12	NM
M15-GU	10/18/2021	232.88	TOC	1476.53	1243.65
M15-GU	11/03/2021	233.49	TOC	1476.53	1243.04
M22-O	10/18/2021	239.51	TOM	1478.58	1239.07
M22-O	10/26/2021	238.59	TOM	1478.58	1239.99
M22-O	11/10/2021	245.87	TOM	1478.58	1232.71
M23-UBF	10/18/2021	221.41	TOM	1477.61	1256.20
M23-UBF	11/03/2021	221.58	TOM	1477.61	1256.03
M23-UBF	12/28/2021	221.35	TOM	1477.61	1256.26
M52-UBF	10/18/2021	234.72	TOC	1485.04	1250.32
M52-UBF	10/27/2021	235.09	TOC	1485.04	1249.95
M52-UBF	11/11/2021	235.32	TOC	1485.04	1249.72
M54-LBF	10/18/2021	237.22	TOC	1481.92	1244.70
M54-LBF	10/21/2021	236.58	TOC	1481.92	1245.34
M54-O	10/18/2021	251.45	TOC	1482.47	1231.02
M54-O	10/25/2021	250.99	TOC	1482.47	1231.48
M54-O	11/10/2021	263.02	TOC	1482.47	1219.45
M55-UBF	10/18/2021	231.28	TOC	1479.14	1247.86
M55-UBF	10/25/2021	232.35	TOC	1479.14	1246.79
M55-UBF	11/09/2021	234.93	TOC	1479.14	1244.21
M56-LBF	10/18/2021	235.82	TOC	1478.65	1242.83
M56-LBF	10/26/2021	236.98	TOC	1478.65	1241.67
M56-LBF	11/09/2021	242.53	TOC	1478.65	1236.12
M57-O	10/18/2021	250.55	TOC	1478.71	1228.16
M57-O	10/20/2021	254.13	TOC	1478.71	1224.58
M57R-O	10/18/2021	248.66	TOC	1478.29	1229.63
M57R-O	10/26/2021	251.51	TOC	1478.29	1226.78
M57R-O	11/09/2021	263.60	TOC	1478.29	1214.69
M58-O	10/18/2021	250.10	TOC	1481.08	1230.98
M58-O	10/26/2021	251.79	TOC	1481.08	1229.29
M58-O	11/10/2021	261.28	TOC	1481.08	1219.80
M59-O	10/18/2021	259.23	TOC	1480.19	1220.96
M59-O	10/19/2021	259.23	TOC	1480.19	1220.96
M59-O	11/09/2021	284.65	TOC	1480.19	1195.54
M59-O	12/13/2021	273.48	TOC	1480.19	1206.71
M60-O	10/18/2021	242.69	TOC	1477.36	1234.67
M60-O	10/19/2021	242.95	TOC	1477.36	1234.41
M60-O	11/10/2021	255.23	TOC	1477.36	1222.13
M60-O	12/13/2021	244.63	TOC	1477.36	1232.73
M61-LBF	10/18/2021	241.48	TOC	1480.78	1239.30
M61-LBF	10/21/2021	240.31	TOC	1480.78	1240.47
MW-01-LBF	10/18/2021	235.01	TOC	1478.92	1243.91
MW-01-LBF	10/20/2021	234.69	TOC	1478.92	1244.23
MW-01-O	10/18/2021	250.58	TOC	1479.07	1228.49
MW-01-O	10/20/2021	251.60	TOC	1479.07	1227.47
MW-01-O	11/22/2021	247.98	TOC	1479.07	1231.09
MW-01-O	12/13/2021	252.09	TOC	1479.07	1226.98
Mine Shaft	10/18/2021	233.44	TOS	1480.40	1246.96
Status of Local Production Wells					
BIA-9R	10/18/2021		Not Pumping		
BIA-10	10/18/2021		Not Pumping		
PW2-1	10/18/2021		Pumping		
WW-4	10/18/2021		Not Pumping		

Notes:

amsl = above mean sea level

NM = not measured

TOC = top of casing

TOM = top of monument

TOS = top of stickup

ATTACHMENT 6C

Groundwater Monitoring Summary

TECHNICAL MEMORANDUM

28 January 2022
File No. 133887-012

TO: Florence Copper Inc.
Brent Berg, General Manager

FROM: Haley & Aldrich, Inc.
Laura Menken, R.G., Technical Specialist
Mark Nicholls, R.G., Lead Hydrogeologist

SUBJECT: Florence Copper Project, Quarterly Compliance Monitoring Report
Underground Injection Control Permit, Fourth Quarter 2021



Haley & Aldrich, Inc. has prepared this memorandum to present the results of the quarterly compliance groundwater monitoring conducted during the fourth quarter (Q4) 2021 at the Florence Copper Project. The Florence Copper Project is subject to two related permits issued by the Arizona Department of Environmental Quality (ADEQ) and the U.S. Environmental Protection Agency (USEPA).

Aquifer Protection Permit (APP) Covering the 1997-98 BHP Pilot Facilities and Future Operations:

- ADEQ APP No. P-101704 (LTF 88973) dated 30 April 2021.

Underground Injection Control (UIC) Permit Covering the Current Production Test Facility:

- USEPA UIC Permit No. R9UIC-AZ3-FY11-1 dated 20 December 2016.

This report presents the results of the Q4 2021 groundwater monitoring activities required by the UIC permit.

Sampling Activities

During Q4 2021, monitoring was conducted at 16 point of compliance, monitoring, and supplemental wells. Water levels were measured on 18 October 2021, and quarterly groundwater sampling was conducted between 19 October and 28 December 2021. Groundwater sampling and analysis was conducted in accordance with the requirements of Part II.F of the UIC permit.

The majority of the monitoring wells are equipped with low-flow bladder pumps. Low-flow sampling was conducted in accordance with Section 2.5.3 of the APP. Wells M14-GL and M22-O were equipped with stainless steel electric submersible pumps and were sampled by purging a minimum of three borehole volumes. No modified sampling procedures were used.

Each sample was labeled, placed in a cooler with ice, maintained at 4 degrees Celsius (°C) ± 2°C, and transported under chain of custody to Turner Laboratories (Turner) for analysis. Samples were analyzed for the quarterly (Level 1) and semi-annual (Level 2) monitoring parameters in Table 1 and 2 of the UIC permit. Eurofins Test America performed diesel range organic analysis as a subcontractor to the primary laboratory. Sample containers collected for radiological parameter analysis were labeled and transported under chain of custody directly to Radiation Safety Engineering, Inc., who performed the analyses as a subcontractor to the primary laboratory. Note that uranium activity and adjusted gross alpha are analyzed and reported only when gross alpha results exceed 12 picocuries per liter (pCi/L).

Florence Copper Inc. (Florence Copper) has elected to monitor three wells for select analytes on a more frequent basis. Additional monitoring of wells M59-O, M60-O, and MW-01-O was performed during Q4 2021. Samples were analyzed for quarterly (Level 1) monitoring parameters. Wells M59-O and M60-O were also analyzed for additional radiological parameters as discussed further below.

Results

The results of the Q4 2021 monitoring event are presented in Tables 1 through 5 as follows:

- Table 1 – Q4 2021 Field Parameters;¹
- Table 2 – Q4 2021 Quarterly (Level 1) Analytical Parameters;
- Table 3 – Q4 2021 Inorganic Parameters;
- Table 4 – Q4 2021 Radionuclide Parameters;
- Table 5 – Q4 2021 Organic Parameters; and
- Table 6 – Q4 2021 Trace Metals.

The Q4 2021 results were compared to the alert levels (AL) and Aquifer Quality Limits (AQL) listed in the applicable tables in Appendix K of the UIC permit and Table 4B of the document submitted to the USEPA dated 12 December 2018, titled *Procedures for Determining Alert Levels and Aquifer Quality Limits for Groundwater Compliance Monitoring*.

A quality assurance/quality control summary of the Q4 2021 data is provided in Appendix A.

¹ Note that turbidity was monitored as a field parameter in addition to field pH, temperature, and specific conductance, but is not required by the APP or UIC permit and is therefore not reported.

Q4 2021 AL AND AQL EXCEEDANCES

The following AL exceedances occurred in Q4 2021 and are described in more detail under the *Contingency Sampling Plans* section.

Well	AL Exceedance	Current Status
M59-O	Magnesium Sulfate TDS Total Uranium Adjusted gross alpha Gross alpha* Gross beta Radium 226 & 228	Voluntary** monthly monitoring ongoing
M60-O	Radon	Voluntary** monthly monitoring ongoing
MW-01-O	Sulfate	Voluntary** monthly monitoring initiated

Note:
Florence Copper has elected to monitor select analytes on a more frequent basis.
** There is no AL for gross alpha in the UIC Permit*
*** Wells M59-O, M60-O, and MW-01-O were previously included in APP No. P-106360 where confirmed exceedances required a monthly frequency for sampling. These wells are not included in APP No. P-101704 and are located within the area of the future ISCR wellfield. These wells will be abandoned before the commencement of ISCR operations. These wells are currently only regulated under the UIC, and the increased frequency is not required. Florence Copper has opted to continue monitoring the selected parameters in these wells voluntarily on a monthly basis.*
TDS = total dissolved solids

The following AQL exceedances occurred in Q4 2021 and are described in more detail under the *Contingency Sampling Plans* section.

Well	AQL Exceedance
M59-O	Adjusted gross alpha Gross beta Radium

Contingency Sampling Plans

Contingency sampling plan procedures consistent with Part II.H.2 of the UIC permit were implemented during Q4 2021 when initial sample results for three wells indicated one or more potential AL or AQL exceedances.

Supplemental Monitoring Well M59-O

Temporary APP No. P-106360 (LTF 80030) dated 13 February 2020 (Temporary APP) expired on 14 December 2020 and was confirmed to be no longer in effect through an ADEQ letter dated 12 February 2021. During fourth quarter (Q4) 2020, while the Temporary APP was still active, sampling frequency was increased to monthly in accordance with Section 2.6.2.4.1 for magnesium, sulfate, total dissolved solids, uranium, gross beta, adjusted gross alpha, and radium 226+228. Monthly sampling was scheduled to begin in February 2021. As of first quarter (Q1) 2021, M59-O is only monitored under the UIC permit. Since sampling frequency was increased to monthly sampling under the Temporary APP but was not resolved before its expiration, Florence Copper has elected to continue monitoring these analytes monthly. On 6 May 2021, Florence Copper notified the USEPA that M59-O will continue to be monitored monthly and reported within 30 days of receiving the monthly monitoring results.

In Q4 2021, well M59-O was sampled on 19 October, 9 November, and 13 December 2021. Results and exceedances are provided in the table below. All other parameters were below their respective ALs/AQLs in each sample. Florence Copper submitted monthly reports on 22 October, 23 November, and 29 December 2021.

Results for Well M59-O				
Date	Parameter	Result	UIC AL	UIC AQL
19 October 2021	Adjusted gross alpha	$28 \pm 2 \text{ pCi/L}$	15.8 pCi/L	15.8 pCi/L
9 November 2021		$27.9 \pm 2.3 \text{ pCi/L}$	15.8 pCi/L	15.8 pCi/L
13 December 2021		$39.5 \pm 1.9 \text{ pCi/L}$	15.8 pCi/L	15.8 pCi/L
19 October 2021	Gross beta	$33.2 \pm 2.7 \text{ pCi/L}$	16 pCi/L	16 pCi/L
9 November 2021		$28.0 \pm 2.4 \text{ pCi/L}$	16 pCi/L	16 pCi/L
13 December 2021		$34.3 \pm 2.5 \text{ pCi/L}$	16 pCi/L	16 pCi/L
19 October 2021	Magnesium	55 mg/L	23 mg/L	No AQL
9 November 2021		65 mg/L	23 mg/L	No AQL
13 December 2021		43 mg/L	23 mg/L	No AQL
19 October 2021	Radium 226 & 228	$10.9 \pm 0.6 \text{ pCi/L}$	6.9 pCi/L	6.9 pCi/L
9 November 2021		$11.9 \pm 0.6 \text{ pCi/L}$	6.9 pCi/L	6.9 pCi/L
13 December 2021		$12.3 \pm 0.6 \text{ pCi/L}$	6.9 pCi/L	6.9 pCi/L
19 October 2021	Sulfate	820 mg/L	202 mg/L	No AQL
9 November 2021		670 mg/L	202 mg/L	No AQL
13 December 2021		720 mg/L	202 mg/L	No AQL
19 October 2021	TDS	1,800 mg/L	854 mg/L	No AQL
9 November 2021		1,500 mg/L	854 mg/L	No AQL
13 December 2021		1,600 mg/L	854 mg/L	No AQL

Results for Well M59-O				
Date	Parameter	Result	UIC AL	UIC AQL
19 October 2021	Total Uranium	0.013 mg/L	0.0052 mg/L	No AQL
9 November 2021		0.0096 mg/L	0.0052 mg/L	No AQL
13 December 2021		0.011 mg/L	0.0052 mg/L	No AQL

Notes:

Bold = Exceedances
AL = alert level
AQL = aquifer quality limit
mg/L = milligrams per liter

pCi/L = picocuries per liter
TDS = total dissolved solids
UIC = Underground Injection Control

Florence Copper will continue voluntary monthly sampling and reporting until analytes are below their ALs and AQLs.

Supplemental Monitoring Well M60-O

Monthly monitoring of gross alpha at well M60-O began in January 2020 due to a Temporary APP AL exceedance of gross alpha confirmed in Q4 2019. The Temporary APP expired on 14 December 2020 and was confirmed to be no longer in effect through an ADEQ letter dated 12 February 2021. As of Q1 2021, M60-O is only permitted under the UIC permit. Since sampling frequency was increased to monthly sampling under the Temporary APP but was not resolved before its expiration, Florence Copper has elected to continue monitoring on a more frequent basis. On 3 June 2021, Florence Copper notified the USEPA that well M60-O will continue to be monitored monthly and reported within 30 days of receiving the monthly monitoring results.

In April 2021, due to an exceedance in a quarterly sample, radon was added to the monthly parameter list. In August and September 2021, adjusted gross alpha results were below the UIC AL and AQL in the monthly samples. As a result, Florence Copper discontinued monthly sampling of adjusted gross alpha starting in Q4 2021.

In Q4 2021, well M60-O was sampled on 19 October, 10 November, and 13 December 2021. Results and exceedances are provided in the table below. All other parameters were below their respective ALs/AQLs in each sample. Florence Copper submitted monthly reports on 1 October, 1 November, and 1 December 2021.

Results for Well M60-O				
Date	Parameter	Result	UIC AL	UIC AQL
19 October 2021	Radon	$3,579 \pm 359$ pCi/L	2,480 pCi/L	No AQL
10 November 2021		$3,483.9 \pm 349.3$ pCi/L	2,480 pCi/L	No AQL
13 December 2021		$2,852.6 \pm 286.2$ pCi/L	2,480 pCi/L	No AQL

Notes:

Bold = Exceedances
AL = alert level
AQL = aquifer quality limit
pCi/L = picocuries per liter
UIC = Underground Injection Control

Florence Copper will continue voluntary monthly monitoring and reporting of Level I parameters and radon until radon is below the AL.

Operational Monitoring Well MW-01-O

On 15 November 2021, Florence Copper was notified that the MW-01-O quarterly sample collected on 20 October 2021 exceeded the sulfate AL. A verification sample was collected on 22 November 2021, which also exceeded the sulfate AL. In response to this verification of the exceedance, Florence Copper elected to initiate voluntary monthly sampling starting in December 2021. Results and exceedances are provided in the table below. All other parameters were below their respective ALs/AQLs in each sample.

Results for Well MW-01-O				
Date	Parameter	Result	UIC AL	UIC AQL
20 October 2021	Sulfate	250 mg/L	229 mg/L	No AQL
22 November 2021		240 mg/L	229 mg/L	No AQL
13 December 2021		230 mg/L	229 mg/L	No AQL

Notes:
Bold = Exceedances
AL = alert level
AQL = aquifer quality limit
mg/L = milligram per liter
UIC = Underground Injection Control

In response to the confirmed sulfate exceedance and in accordance with Part II.H.2.a of the UIC permit, Florence Copper submitted a 5-day notification on 8 December 2021. On 22 December 2021, Florence Copper submitted a 30-day report providing an evaluation of the cause and impacts, as well as a review of mitigation strategies.

With the collection of the first monthly sample in December, Florence Copper will submit a monthly report for the 13 December 2021 sample by 3 February 2022. Florence Copper will continue voluntary monthly monitoring and reporting of Level I parameters until sulfate is below its respective AL.

Enclosures:

- Table 1 – Q4 2021 Field Parameters
- Table 2 – Q4 2021 Quarterly (Level 1) Analytical Parameters
- Table 3 – Q4 2021 Inorganic Parameters
- Table 4 – Q4 2021 Radionuclide Parameters
- Table 5 – Q4 2021 Organic Parameters
- Table 6 – Q4 2021 Trace Metals
- Appendix A – Data Quality Assurance/Quality Control Summary Memorandum

TABLES

TABLE 1
Q4 2021 FIELD PARAMETERS
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Location	Sample Date	Temperature, Field Deg C	Temperature, Field Deg F	pH, Field pH units	pH Low UIC Alert Level pH units	pH High UIC Alert Level pH units	Specific Conductance, Field μmhos/cm
M14-GL	11/08/2021	27.0	80.6	8.25	NE	NE	877
M15-GU	11/03/2021	23.1	73.6	7.29	NE	NE	1,554
M22-O	10/26/2021	28.3	82.9	8.12	NE	NE	829
M22-O ⁽³⁾	11/10/2021	28.4	83.1	8.05	NE	NE	842
M23-UBF	11/03/2021	23.5	74.3	6.94	NE	NE	1,990
M23-UBF ⁽¹⁾	12/28/2021	22.2	72.0	7.14	NE	NE	2,102
M52-UBF	10/27/2021	23.9	75.0	7.28	6.9	7.9	1,530
M52-UBF ⁽⁴⁾	11/11/2021	22.5	72.5	7.17	6.9	7.9	1,625
M54-LBF	10/21/2021	25.6	78.1	7.07	6.5	8.2	1,598
M54-O	10/25/2021	26.8	80.2	7.58	6.8	9.4	788
M54-O ⁽³⁾	11/10/2021	22.9	73.2	8.18	6.8	9.4	786
M55-UBF	10/25/2021	24.6	76.3	7.11	6.6	7.8	1,739
M55-UBF ⁽²⁾	11/09/2021	23.9	75.0	7.10	6.6	7.8	1,944
M56-LBF	10/26/2021	22.7	72.9	7.19	6.5	8.3	1,605
M56-LBF ⁽²⁾	11/09/2021	23.4	74.1	7.20	6.5	8.3	1,693
M57-O	10/20/2021	26.2	79.2	7.57	7.2	8.5	1,078
M57R-O	10/26/2021	25.2	77.4	8.22	NE	NE	1,613
M57R-O ⁽⁵⁾	11/09/2021	24.1	75.4	7.56	NE	NE	1,560
M58-O	10/26/2021	24.8	76.6	7.49	6.2	9.0	1,660
M58-O ⁽³⁾	11/10/2021	24.2	75.6	7.43	6.2	9.0	1,687
M59-O	10/19/2021	26.4	79.5	7.46	7.0	8.7	2,323
M59-O ⁽⁶⁾	11/09/2021	26.3	79.3	7.55	7.0	8.7	2,271
M59-O ⁽⁶⁾	12/13/2021	26.3	79.3	7.36	7.0	8.7	2,425
M60-O	10/19/2021	24.3	75.7	7.30	6.3	9.0	1,572
M60-O ⁽⁷⁾	11/10/2021	23.6	74.5	7.30	6.3	9.0	1,630
M60-O ⁽⁷⁾	12/13/2021	23.7	74.7	7.17	6.3	9.0	1,674
M61-LBF	10/21/2021	26.6	79.9	7.79	6.8	9.4	813
MW-01-LBF	10/20/2021	25.6	78.1	7.03	6.2	8.5	1,638
MW-01-O	10/20/2021	25.5	77.9	7.05	5.8	9.4	1,590
MW-01-O ⁽⁸⁾	11/22/2021	22.6	72.7	7.41	5.8	9.4	1,785
MW-01-O ⁽⁸⁾	12/13/2021	22.1	71.8	7.32	5.8	9.4	1,851

Notes:

- (1) Resampling conducted on 12/28/2021 to complete parameter suite.
- (2) Partial resampling conducted on 11/10/2021 due to shipping issue.
- (3) Partial resampling conducted on 11/11/2021 due to shipping issue.
- (4) Partial resampling conducted on 11/12/2021 due to shipping issue.
- (5) Resampling conducted on 11/9/2021 to complete sampling suite.
- (6) Increased frequency monitoring conducted on 11/9/2021 and 12/13/2021.
- (7) Increased frequency monitoring conducted on 11/10/2021 and 12/13/2021.
- (8) Increased frequency monitoring conducted on 11/22/2021 and 12/13/2021.

μmhos/cm = micromhos per centimeter

Deg C = degrees Celsius

Deg F = degrees Fahrenheit

NE = not established

UIC = Underground Injection Control

TABLE 2

Q4 2021 QUARTERLY (LEVEL 1) ANALYTICAL PARAMETERS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Location ID	Sample Date	Sample Type	Magnesium, Dissolved		Sulfate		Fluoride			Total Dissolved Solids (TDS)	
			Concentration	UIC Alert Level	Concentration	UIC Alert Level	Concentration	UIC Alert Level	UIC AQL	Concentration	UIC Alert Level
M14-GL	11/08/2021	Primary	1.9 J	23	54	144	0.57	3.2	4.0	380	874
M15-GU	11/03/2021	Primary	27	44	96	126	0.42 J	3.2	4.0	870	1359
M22-O	10/26/2021	Primary	6.1	8.6	70	86	0.68	3.2	4.0	430	1094
M23-UBF	11/03/2021	Primary	30	69	240	411	0.67	3.2	4.0	1,100	2392
M23-UBF	11/03/2021	Duplicate	32	69	240	411	0.69	3.2	4.0	1,100	2392
M23-UBF ⁽¹⁾	12/28/2021	Primary	28	69	230	411	0.76	3.2	4.0	1,100	2392
M52-UBF	10/27/2021	Primary	22	41	150	316	0.79	3.2	4.0	860	1502
M54-LBF	10/21/2021	Primary	23	42	170	297	0.65	3.2	4.0	860	1561
M54-O	10/25/2021	Primary	5.6	10	48	200	0.66	3.2	4.0	390	771
M55-UBF	10/25/2021	Primary	24	45	170	425	0.60	3.2	4.0	940	1711
M55-UBF	10/25/2021	Duplicate	24	45	180	425	0.62	3.2	4.0	950	1711
M56-LBF	10/26/2021	Primary	24	41	160	281	< 0.29	3.2	4.0	890	1485
M57-O	10/20/2021	Primary	14	18	94 J	200	0.53	3.2	4.0	530	842
M57R-O	10/26/2021	Primary	26	35	170	230	0.41 J	3.2	4.0	830	1113
M57R-O ⁽²⁾	11/09/2021	Primary	27	35	200	230	0.45 J	3.2	4.0	820	1113
M58-O	10/26/2021	Primary	20	51	230	385	0.55	3.2	4.0	920	1539
M59-O	10/19/2021	Primary	55	23	820	202	0.45 J	3.2	4.0	1,800	854
M59-O ⁽³⁾	11/09/2021	Primary	65	23	670	202	0.54	3.2	4.0	1,500	854
M59-O ⁽³⁾	12/13/2021	Primary	43	23	720	202	0.54	3.2	4.0	1,600	854
M60-O	10/19/2021	Primary	25	45	130	271	< 0.29	3.2	4.0	880	1314
M60-O ⁽⁴⁾	11/10/2021	Primary	27	45	170	271	< 0.29	3.2	4.0	900	1314
M60-O ⁽⁴⁾	12/13/2021	Primary	25	45	170	271	0.30 J	3.2	4.0	870	1314
M61-LBF	10/21/2021	Primary	7.4	12	61	200	0.69	3.2	4.0	360	769
MW-01-LBF	10/20/2021	Primary	25	43	150	307	0.33 J	3.2	4.0	910	1543
MW-01-LBF	10/20/2021	Duplicate	25	43	150	307	0.32 J	3.2	4.0	990	1543
MW-01-O	10/20/2021	Primary	31	42	250	229	0.43 J	3.2	4.0	1,000	1409
MW-01-O ⁽⁵⁾	11/22/2021	Primary	32	42	240	229	0.35 J	3.2	4.0	1,000	1409
MW-01-O ⁽⁵⁾	12/13/2021	Primary	31	42	230	229	0.40 J	3.2	4.0	1,000	1409
Arizona Aquifer Water Quality Standard ⁽⁶⁾			--	--	--	--	4.0	--	--	--	--

Notes:

(1) Resampling conducted on 12/28/2021 to complete parameter suite.

(2) Resampling conducted on 11/9/2021 to complete parameter suite.

(3) Increased frequency monitoring conducted on 11/9/2021 and 12/13/2021.

(4) Increased frequency monitoring conducted on 11/10/2021 and 12/13/2021.

(5) Increased frequency monitoring conducted on 11/22/2021 and 12/13/2021.

(6) Arizona Aquifer Water Quality Standard (AWQS), Drinking Water Standard, December 31, 2016.

Alert Level Exceedance

All results in milligrams per liter (mg/L)

Detects are **bolded**.

Non-detects are reported to the laboratory method detection limit (< MDL).

AQL = Aquifer Quality Limit

J = estimated value

UIC = Underground Injection Control Permit No. R9UIC-AZ3-FY11-1

TABLE 3

Q4 2021 INORGANIC PARAMETERS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Location	Sample Date	Sample Type	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Dissolved Calcium	Chloride	Nitrate (as N)			Nitrite (as N)			Dissolved Potassium	Dissolved Sodium	pH (Lab)	Anion/Cation Ratio
			mg/L	mg/L	mg/L	mg/L	mg/L	UIC AL	UIC AQL	mg/L	UIC AL	UIC AQL	mg/L	mg/L	pH units	%
M14-GL	11/08/2021	Primary	66	< 2.0	19	170	0.93	--	--	< 0.027	--	--	2.8 J	120	8.2	9.28
M15-GU	11/03/2021	Primary	130	< 2.0	100	330	6.3	--	--	< 0.027	--	--	5.5	130	7.7	7.41
M22-O	10/26/2021	Primary	100	< 2.0	34	130	0.60	--	--	0.14	--	--	3.9 J	100	8.1	8.50
M23-UBF	12/28/2021	Primary	190	< 2.0	150	310	9.2	--	--	< 0.027	--	--	5.2	180	7.4	3.13
M52-UBF	10/27/2021	Primary	200	< 2.0	100	200	8.7	18.3	18.3	< 0.027	0.8	1.0	4.9 J	140	7.6	4.59
M54-LBF	10/21/2021	Primary	200	< 2.0	120	220	7.4	18.4	18.4	< 0.027	0.8	1.0	5.0	150	7.4	2.07
M54-O	10/25/2021	Primary	110	< 2.0	28	120	0.46 J	8.0	10	< 0.027	0.8	1.0	4.0 J	100	7.9	8.56
M55-UBF	10/25/2021	Primary	210	< 2.0	110	230	8.0	17	17	< 0.027	0.8	1.0	5.0	150	7.5	5.47
M55-UBF	10/25/2021	Duplicate	210	< 2.0	110	230	7.9	17	17	< 0.027	0.8	1.0	5.0	150	7.7	6.19
M56-LBF	10/26/2021	Primary	200	< 2.0	110	230	10	15.5	15.5	< 0.027	0.8	1.0	5.8	150	7.5	4.02
M57-O	10/20/2021	Primary	120	< 2.0	62	160	2.7	8.0	10	< 0.027	0.8	1.0	4.4 J	100	8.1	6.43
M57R-O	11/09/2021	Primary	130	< 2.0	120	240	6.3	--	10.3	< 0.027	0.8	1.0	6.8	130	7.9	2.27
M58-O	10/26/2021	Primary	180	< 2.0	100	280	8.4	17.4	17.4	< 0.027	0.8	1.0	6.2	170	7.7	16.1
M59-O	10/19/2021	Primary	120	< 2.0	290	200	3.7	8.0	10	< 0.027	0.8	1.0	7.8	190	7.7	2.22
M60-O	10/19/2021	Primary	210	< 2.0	120	180	8.9	16.3	16.3	< 0.027	0.8	1.0	5.7	140	7.7	2.96
M61-LBF	10/21/2021	Primary	98	< 2.0	40	130	0.40 J	8.0	10	< 0.027	0.8	1.0	3.9 J	91	7.9	7.20
MW-01-LBF	10/20/2021	Primary	210	< 2.0	110	210	9.1	16.1	16.1	< 0.027	0.8	1.0	6.1	150	7.7	1.82
MW-01-LBF	10/20/2021	Duplicate	210	< 2.0	110	210	9.1	16.1	16.1	< 0.027	0.8	1.0	6.2	150	7.7	1.81
MW-01-O	10/20/2021	Primary	140	< 2.0	140	260	7.9	13.5	13.5	< 0.027	0.8	1.0	5.5	140	7.9	2.52
Arizona Aquifer Water Quality Standard ⁽¹⁾			--	--	--	--	10			1.0			--	--	--	

Notes:

(1) Arizona Aquifer Water Quality Standard (AWQS), Drinking Water Standard, December 31, 2016.

Detects are **bolded**.

Non-detects are reported to the laboratory method detection limit (< MDL).

AL = Alert Level

AQL = Aquifer Quality Limit

J = estimated value

UIC = Underground Injection Control Permit No. R9UIC-AZ3-FY11-1

TABLE 4
Q4 2021 RADIONUCLIDE PARAMETERS
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Location ID	Sample ID	Sample Type	Gross Alpha Analytes		Total Uranium Isotopes ⁽¹⁾	Adjusted Gross Alpha Activity ⁽¹⁾			Gross Beta Analytes			Radium-226 + 228			Radon-222	
			pCi/L	UIC AL	pCi/L	pCi/L	UIC AL	UIC AQL	pCi/L	UIC AL	UIC AQL	pCi/L	UIC AL	UIC AQL	pCi/L	UIC AL
M14-GL	11/08/2021	Primary	1.1 ± 0.3	15	--	--	12	15	2.6 U	--	--	0.6 U	4.0	5.0	1213.6 ± 122.2	--
M15-GU	11/03/2021	Primary	4.1 ± 0.8	15	--	--	12	15	6.6 ± 1.8	--	--	0.6 U	4.0	5.0	615.3 ± 62.6	--
M22-O	10/26/2021	Primary	5.6 ± 0.9	15	--	--	12	15	6.1 ± 1.5	--	--	0.6 ± 0.3	4.0	5.0	1767 ± 178	--
M23-UBF	12/28/2021	Primary	8.4 ± 1	15	--	--	12	15	3.1 U	--	--	0.7 U	4.0	5.0	182.2 ± 19.8	--
MS2-UBF	10/27/2021	Primary	4.7 ± 0.5	--	--	--	12	15	3.0 U	18	18	1.1 ± 0.4	4.0	5.0	107 ± 13	265
MS4-LBF	10/21/2021	Primary	5.1 ± 0.5	--	--	--	12.9	15	2.4 U	26	26	0.6 U	4.0	5.0	458 ± 47	1242
MS4-O	10/25/2021	Primary	2.1 ± 0.3	--	--	--	12.6	15	5.8 ± 1.6	28	28	0.7 ± 0.2	4.0	5.0	4326 ± 434	8453
MS5-UBF	10/25/2021	Primary	6.6 ± 0.5	--	--	--	12	15	6.0 ± 1.7	17	17	0.6 U	4.0	5.0	159 ± 18	394
MS5-UBF	10/25/2021	Duplicate	5.8 ± 0.5	--	--	--	12	15	6.5 ± 1.8	17	17	0.6 U	4.0	5.0	151 ± 17	394
MS6-LBF	10/26/2021	Primary	7.6 ± 1	--	--	--	13.6	15	10.0 ± 1.8	22	22	0.6 U	4.0	5.0	470 ± 49	1152
MS7-O	10/20/2021	Primary	6.7 ± 0.9	--	--	--	12	15	8.0 ± 1.6	16	16	0.9 ± 0.3	4.0	5.0	6573 ± 659	11180
MS7R-O	11/09/2021	Primary	13.3 ± 0.8	16.8	11.2 ± 2.3	2.1 ± 2.4	12	15	--	13.2	13.2	2.7 ± 0.4	4.8	5.0	--	--
MS8-O	10/26/2021	Primary	30.8 ± 1.8	--	17.1 ± 1.4	13.7 ± 2.3	15	15	18.5 ± 2	47	47	7.7 ± 0.7	13.1	13.1	3682 ± 370	13070
MS9-O	10/19/2021	Primary	32.1 ± 1.3	--	4.1 ± 1.5	28 ± 2	15.8	15.8	33.2 ± 2.7	16	16	10.9 ± 0.6	6.9	6.9	8363 ± 838	20462
MS9-O ⁽²⁾	11/09/2021	Primary	34.2 ± 1.4	--	6.3 ± 1.8	27.9 ± 2.3	15.8	15.8	28.0 ± 2.4	16	16	11.9 ± 0.6	6.9	6.9	--	20462
MS9-O ⁽²⁾	12/13/2021	Primary	48.1 ± 1.6	--	8.6 ± 1	39.5 ± 1.9	15.8	15.8	34.3 ± 2.5	16	16	12.3 ± 0.6	6.9	6.9	--	20462
M60-O	10/19/2021	Primary	39.5 ± 2	--	34.4 ± 4	5.1 ± 4.5	17.4	17.4	25.1 ± 2.2	33	33	6.8 ± 0.6	13.9	13.9	3579 ± 359	2480
M60-O ⁽³⁾	11/10/2021	Primary	--	--	--	--	17.4	17.4	--	33	33	--	13.9	13.9	3483.9 ± 349.3	2480
M60-O ⁽³⁾	12/13/2021	Primary	--	--	--	--	17.4	17.4	--	33	33	--	13.9	13.9	2852.6 ± 286.2	2480
M61-LBF	10/21/2021	Primary	2.4 ± 0.3	--	--	--	12	15	4.9 ± 1.5	16	16	0.7 ± 0.3	4.0	5.0	320 ± 33	5869
MW-01-LBF	10/20/2021	Primary	7.6 ± 0.8	--	--	--	21.1	21.1	8.2 ± 1.8	21	21	0.6 U	4.0	5.0	584 ± 60	2094
MW-01-LBF	10/20/2021	Duplicate	11.3 ± 1.1	--	--	--	21.1	21.1	6.5 ± 1.7	21	21	0.6 U	4.0	5.0	601 ± 62	2094
MW-01-O	10/20/2021	Primary	26.3 ± 1.7	--	10.6 ± 2.2	15.7 ± 2.8	21.9	21.9	16.1 ± 2	34	34	6.6 ± 0.6	14.4	14.4	4212 ± 423	15707
Arizona Aquifer Water Quality Standard ⁽⁴⁾			-- ⁽⁶⁾	--	15		4 mrem/yr			5		--			--	

Notes:

(1) Total uranium isotopes are analyzed and adjusted gross alpha calculated when gross alpha concentration exceeds 12 pCi/L.

(2) Increased frequency monitoring conducted on 11/9/2021 and 12/13/2021.

(3) Increased frequency monitoring conducted on 11/10/2021 and 12/13/2021.

(4) Arizona Aquifer Water Quality Standard (AWQS), Drinking Water Standard, December 31, 2016.

(5) The AWQS applies to Adjusted Gross Alpha, which equals Gross Alpha minus Uranium Isotopes.

Detected are **bolded**.

Alert Level Exceedance

AL = Alert Level

AQL = Aquifer Quality Limit

pCi/L = picocuries per liter

U = Analyte not detected above the Minimum Detectable Concentration (MDC U or Result U ± Uncertainty)

UIC = Underground Injection Control Permit No. R9UIC-AZ3-FY11-1

TABLE 5
Q4 2021 ORGANIC COMPOUNDS
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Location	Sample Date	Sample Type	Benzene			Ethylbenzene			Toluene			Total Xylene			Naphthalene			Octane			Total Petroleum Hydrocarbons - Diesel	
			µg/L	UIC AL	UIC AQL	µg/L	UIC AL	UIC AQL	µg/L	UIC AL	UIC AQL	µg/L	UIC AL	UIC AQL	µg/L	UIC AL	UIC AQL	µg/L	UIC AL	UIC AQL	mg/L	UIC AL
M14-GL	11/08/2021	Primary	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	--	--	< 0.50	--	--	< 0.092	--
M15-GU	11/03/2021	Primary	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	--	--	< 0.50	--	--	< 0.099	--
M22-O	10/26/2021	Primary	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	--	--	< 0.50	--	--	--	--
M22-O ⁽³⁾	11/10/2021	Primary	--	4	5	--	560	700	--	800	1000	--	8000	10000	--	--	--	--	--	--	< 0.095	--
M23-UBF	12/28/2021	Primary	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	--	--	< 0.50	--	--	< 0.10	--
M52-UBF	10/27/2021	Primary	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	--	0.28
M52-UBF ⁽⁴⁾	11/11/2021	Primary	--	4	5	--	560	700	--	800	1000	--	8000	10000	--	3.5	3.5	--	0.9	0.9	< 0.095	0.28
M54-LBF	10/21/2021	Primary	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	< 0.11	0.28
M54-O	10/25/2021	Primary	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	--	0.28
M54-O ⁽³⁾	11/10/2021	Primary	--	4	5	--	560	700	--	800	1000	--	8000	10000	--	3.5	3.5	--	0.9	0.9	< 0.096	0.28
M55-UBF	10/25/2021	Primary	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	--	0.28
M55-UBF	10/25/2021	Duplicate	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	--	0.28
M55-UBF ⁽²⁾	11/09/2021	Primary	--	4	5	--	560	700	--	800	1000	--	8000	10000	--	3.5	3.5	--	0.9	0.9	< 0.10	0.28
M56-LBF	10/26/2021	Primary	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	--	0.28
M56-LBF ⁽²⁾	11/09/2021	Primary	--	4	5	--	560	700	--	800	1000	--	8000	10000	--	3.5	3.5	--	0.9	0.9	< 0.10	0.28
M57-O	10/20/2021	Primary	< 0.063	4	5	< 0.054	560	700	0.080 J	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	< 0.095	0.28
M57R-O	11/09/2021	Primary	< 0.063	4	5	< 0.054	560	700	0.72	800	1000	< 0.13	8000	10000	< 0.073	--	--	< 0.50	--	--	< 0.099	--
M58-O	10/26/2021	Primary	< 0.063	4	5	< 0.054	560	700	0.080 J	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	--	0.28
M58-O ⁽³⁾	11/10/2021	Primary	--	4	5	--	560	700	--	800	1000	--	8000	10000	--	3.5	3.5	--	0.9	0.9	< 0.099	0.28
M59-O	10/19/2021	Primary	< 0.063	4	5	< 0.054	560	700	2.8	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	< 0.096	0.28
M60-O	10/19/2021	Primary	< 0.063	4	5	< 0.054	560	700	0.080 J	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	< 0.098	0.28
M61-LBF	10/21/2021	Primary	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	< 0.098	0.28
MW-01-LBF	10/20/2021	Primary	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	< 0.10	0.28
MW-01-LBF	10/20/2021	Duplicate	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	< 0.10	0.28
MW-01-O	10/20/2021	Primary	< 0.063	4	5	< 0.054	560	700	< 0.057	800	1000	< 0.13	8000	10000	< 0.073	3.5	3.5	< 0.50	0.9	0.9	< 0.097	0.28
Arizona Aquifer Water Quality Standard ⁽¹⁾			5			700			1000			10000			--			--			--	

Notes:

(1) Arizona Aquifer Water Quality Standard (AWQS), Drinking Water Standard, December 31, 2016.

(2) Partial resampling conducted on 11/10/2021 due to shipping issue.

(3) Partial resampling conducted on 11/11/2021 due to shipping issue.

(4) Partial resampling conducted on 11/12/2021 due to shipping issue.

Detects are bolded.

Non-detects are reported to the laboratory method detection limit (< MDL).

µg/L = micrograms per liter

AL = Alert Level

AQL = Aquifer Quality Limit

J = estimated value

mg/L = milligrams per liter

UIC = Underground Injection Permit No. R9UIC-AZ3-FY11-1

TABLE 6
Q4 2021 TRACE METALS
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Location	Sample Date	Sample Type	Dissolved Aluminum		Dissolved Antimony			Dissolved Arsenic			Dissolved Barium			Dissolved Beryllium			Dissolved Cadmium			Dissolved Chromium ⁽¹⁾			Dissolved Cobalt			Dissolved Copper			Dissolved Iron	
			mg/L	UIC AL	mg/L	UIC AL	UIC AQL	mg/L	UIC AL	UIC AQL	mg/L	UIC AL	UIC AQL	mg/L	UIC AL	UIC AQL	mg/L	UIC AL	UIC AQL	mg/L	UIC AL	UIC AQL	mg/L	UIC AL	UIC AQL	mg/L	UIC AL	UIC AQL	mg/L	UIC AL
M14-GL	11/08/2021	Primary	< 0.013	0.71	< 0.000039	0.0048	0.006	0.00065	0.026	0.05	0.017	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	0.004	0.005	0.0029	0.08	0.1	< 0.000010	0.005	0.00051	0.51	--	< 0.0031	2.2	
M15-GU	11/03/2021	Primary	< 0.013	0.71	< 0.000039	0.0048	0.006	0.0013	0.026	0.05	0.0043	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	--	0.02	0.0016	0.08	0.1	0.000060 J	0.005	0.00090	0.51	--	< 0.0031	2.2	
M22-O	10/26/2021	Primary	< 0.013	0.71	0.000042 J	0.0048	0.006	0.00014 J	0.026	0.05	0.0028	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	--	0.02	0.00078	0.08	0.1	0.000013 J	0.005	0.00052	0.51	--	0.053 J	2.2	
M23-UBF	12/28/2021	Primary	< 0.013	0.71	0.000081 J	0.0048	0.006	0.0017	0.026	0.05	0.069	1.6	2.0	0.000024 J	0.0032	0.004	< 0.000050	0.004	0.005	0.00049 J	0.08	0.1	0.000026 J	0.005	0.014	0.51	--	< 0.0031	2.2	
M52-UBF	10/27/2021	Primary	< 0.013	0.16	0.000047 J	0.0048	0.006	0.0027	0.026	0.05	0.045	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	0.004	0.005	0.00054	0.08	0.1	0.000026 J	0.002	0.00096	0.8	1.0	< 0.0031	0.24	
M54-LBF	10/21/2021	Primary	< 0.013	0.16	< 0.000039	0.0048	0.006	0.0018	0.026	0.05	0.052	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	0.004	0.005	0.00068	0.08	0.1	0.000022 J	0.002	0.0011	0.8	1.0	< 0.0031	0.24	
M54-O	10/25/2021	Primary	< 0.013	0.16	< 0.000039	0.0048	0.006	0.00038 J	0.026	0.05	0.0052	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	0.004	0.005	0.0032	0.08	0.1	0.010	0.002	0.0020	0.8	1.0	0.016 J	0.89	
M55-UBF	10/25/2021	Primary	< 0.013	0.16	0.000051 J	0.0048	0.006	0.0017	0.026	0.05	0.060	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	0.004	0.005	0.00085	0.08	0.1	0.000025 J	0.002	0.0015	0.8	1.0	< 0.0031	0.24	
M55-UBF	10/25/2021	Duplicate	< 0.013	0.16	0.000049 J	0.0048	0.006	0.0018	0.026	0.05	0.060	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	0.004	0.005	0.00085	0.08	0.1	0.000014 J	0.002	0.00076	0.8	1.0	0.0031 J	0.24	
M56-LBF	10/26/2021	Primary	< 0.013	0.16	0.00010 J	0.0048	0.006	0.0013	0.026	0.05	0.072	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	0.004	0.005	0.00065	0.08	0.1	0.000035 J	0.002	0.014	0.8	1.0	0.0062 J	0.24	
M57-O	10/20/2021	Primary	< 0.13	0.16	0.000067 J	0.0048	0.006	0.00075	0.026	0.05	0.0076	1.6	2.0	< 0.000013	0.0032	0.004	0.000056 J	0.004	0.005	0.0022	0.08	0.1	0.000022 J	0.002	0.0020	0.8	1.0	0.0039 J	0.24	
M57R-O	11/09/2021	Primary	< 0.013	0.16	< 0.000039	0.0048	0.006	0.0012	0.026	0.05	0.030	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	0.004	0.005	0.0066	0.08	0.1	0.00065	0.009	0.0015	0.8	--	0.028 J	0.24	
M58-O	10/26/2021	Primary	< 0.013	0.16	< 0.000039	0.0048	0.006	0.0012	0.026	0.05	0.039	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	0.004	0.005	0.0024	0.08	0.1	0.00015 J	0.002	0.0032	0.8	1.0	0.012 J	0.24	
M59-O	10/19/2021	Primary	< 0.13	0.16	0.000048 J	0.0048	0.006	0.0013	0.026	0.05	0.10	1.6	2.0	< 0.000013	0.0032	0.004	0.000069 J	0.004	0.005	0.0018	0.08	0.1	0.00012 J	0.002	0.022	0.8	1.0	< 0.0031	0.24	
M59-O ⁽²⁾	11/09/2021	Primary	--	0.16	--	0.0048	0.006	--	0.026	0.05	--	1.6	2.0	--	0.0032	0.004	--	0.004	0.005	--	0.08	0.1	--	0.002	--	0.8	1.0	--	0.24	
M59-O ⁽²⁾	12/13/2021	Primary	--	0.16	--	0.0048	0.006	--	0.026	0.05	--	1.6	2.0	--	0.0032	0.004	--	0.004	0.005	--	0.08	0.1	--	0.002	--	0.8	1.0	--	0.24	
M60-O	10/19/2021	Primary	< 0.13	0.16	< 0.000039	0.0048	0.006	0.00065	0.026	0.05	0.044	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	0.004	0.005	0.00071	0.08	0.1	0.00013 J	0.002	0.0035	0.8	1.0	< 0.0031	0.24	
M61-LBF	10/21/2021	Primary	< 0.013	0.16	0.000052 J	0.0048	0.006	0.0016	0.026	0.05	0.092	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	0.004	0.005	0.0020	0.08	0.1	0.00020 J	0.002	0.00037 J	0.8	1.0	0.013 J	1.13	
MW-01-LBF	10/20/2021	Primary	< 0.013	0.16	0.000042 J	0.0048	0.006	0.0011	0.026	0.05	0.041	1.6	2.0	< 0.000013	0.0032	0.004	< 0.000050	0.004	0.005	0.0017	0.08	0.1	0.00020 J	0.002	0.00092	0.8	1.0	0.024 J		

TABLE 6
Q4 2021 TRACE METALS
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Location	Sample Date	Sample Type	Dissolved Lead			Dissolved Manganese		Dissolved Mercury			Dissolved Nickel			Dissolved Selenium			Dissolved Thallium			Total Uranium		Dissolved Zinc	
			mg/L	UIC AL	UIC AQL	mg/L	UIC AL	mg/L	UIC AL	UIC AQL	mg/L	UIC AL	UIC AQL	mg/L	UIC AL	UIC AQL	mg/L	UIC AL	UIC AQL	mg/L	UIC AL	mg/L	UIC AL
M14-GL	11/08/2021	Primary	< 0.000057	0.04	0.05	0.0020	0.22	< 0.000041	0.0011	0.002	0.00015 J	0.08	0.1	0.00068 J	0.027	0.05	< 0.000023	0.0016	0.002	0.00079	--	< 0.0023	2.5
M15-GU	11/03/2021	Primary	< 0.000057	0.04	0.05	0.00032	0.22	< 0.000041	0.0011	0.002	0.0035	0.08	0.13	0.0012 J	0.027	0.05	< 0.000023	0.0016	0.002	0.0031	--	< 0.0023	2.5
M22-O	10/26/2021	Primary	< 0.000057	0.04	0.05	0.016	0.22	< 0.000041	0.0011	0.002	0.00032 J	0.08	0.1	0.0020 J	0.027	0.05	< 0.000023	--	0.01	0.0030	--	< 0.0023	2.5
M23-UBF	12/28/2021	Primary	< 0.000057	0.04	0.05	0.0039	0.22	0.000064 J	0.0011	0.002	0.00021 J	0.08	0.1	0.00051 J	0.027	0.05	< 0.000023	--	0.012	0.0056	--	0.0023 J	2.5
M52-UBF	10/27/2021	Primary	0.00011 J	0.04	0.05	0.00025	0.04	< 0.000041	0.0016	0.002	0.00064	0.08	0.1	0.0020 J	0.04	0.05	< 0.000023	0.0016	0.002	0.0045	0.0081	< 0.0023	4.0
M54-LBF	10/21/2021	Primary	< 0.000057	0.04	0.05	0.00020 J	0.04	< 0.000041	0.0016	0.002	0.00054	0.08	0.1	0.00077 J	0.04	0.05	< 0.000023	0.0016	0.002	0.0045	0.0118	< 0.0023	4.0
M54-O	10/25/2021	Primary	< 0.000057	0.04	0.05	0.0054	0.3	< 0.000041	0.0016	0.002	0.041	0.08	0.1	0.0018 J	0.04	0.05	< 0.000023	0.0016	0.002	0.0033	0.0193	< 0.0023	4.0
M55-UBF	10/25/2021	Primary	< 0.000057	0.04	0.05	0.0013	0.29	< 0.000041	0.0016	0.002	0.00073	0.08	--	0.00090 J	0.04	0.05	< 0.000023	0.0016	0.002	0.0043	0.0098	0.0031 J	4.0
M55-UBF	10/25/2021	Duplicate	< 0.000057	0.04	0.05	0.00099	0.29	< 0.000041	0.0016	0.002	0.00029 J	0.08	--	0.0013 J	0.04	0.05	< 0.000023	0.0016	0.002	0.0042	0.0098	< 0.0023	4.0
M56-LBF	10/26/2021	Primary	0.000059 J	0.04	0.05	0.0012	0.42	< 0.000041	0.0016	0.002	0.00049 J	0.08	--	0.0012 J	0.04	0.05	< 0.000023	0.0016	0.002	0.0071	0.0148	< 0.0023	4.0
M57-O	10/20/2021	Primary	< 0.000057	0.04	0.05	0.0013	0.04	< 0.000041	0.0016	0.002	0.00055	0.08	--	0.00083 J	0.04	0.05	< 0.000023	0.0016	0.002	0.0040	0.0135	< 0.0023	4.0
M57R-O	11/09/2021	Primary	< 0.000057	0.04	0.05	0.0039	0.04	< 0.000041	0.0016	0.002	0.037	0.08	0.1	0.0014 J	0.04	0.05	< 0.000023	0.0016	0.002	0.015	--	< 0.0023	4.0
M58-O	10/26/2021	Primary	< 0.000057	0.04	0.05	0.00091	0.04	< 0.000041	0.0016	0.002	0.039	0.08	--	0.0019 J	0.04	0.05	< 0.000023	0.0016	0.002	0.029	0.1341	0.0023 J	4.0
M59-O	10/19/2021	Primary	< 0.000057	0.04	0.05	0.0013	0.05	< 0.000041	0.0016	0.002	0.00013 J	0.08	--	0.034	0.04	0.05	< 0.000023	0.0016	0.002	0.013	0.0052	0.0064 J	4.0
M59-O ⁽²⁾	11/09/2021	Primary	--	0.04	0.05	--	0.05	--	0.0016	0.002	--	0.08	--	--	0.04	0.05	--	0.0016	0.002	0.0096	0.0052	--	4.0
M59-O ⁽²⁾	12/13/2021	Primary	--	0.04	0.05	--	0.05	--	0.0016	0.002	--	0.08	--	--	0.04	0.05	--	0.0016	0.002	0.011	0.0052	--	4.0
M60-O	10/19/2021	Primary	< 0.000057	0.04	0.05	0.00047	0.07	< 0.000041	0.0016	0.002	0.0049	0.2	--	0.00080 J	0.04	0.05	< 0.000023	0.0016	0.002	0.043	0.0612	< 0.0023	4.0
M61-LBF	10/21/2021	Primary	< 0.000057	0.04	0.05	0.0014	0.18	< 0.000041	0.0016	0.002	0.013	0.08	--	0.0013 J	0.04	0.05	< 0.000023	0.0016	0.002	0.00984	0.0041	< 0.0023	4.0
MW-01-LBF	10/20/2021	Primary	< 0.000057	0.04	0.05	0.0012	0.23	< 0.000041	0.0016	0.002	0.0097	0.08	--	0.0012 J	0.04	0.05	< 0.000023	0.0016	0.002	0.0089	0.0154	0.0023 J	4.6
MW-01-LBF	10/20/2021	Duplicate	< 0.000057	0.04	0.05	0.0015	0.23	< 0.000041	0.0016	0.002	0.011	0.08	--	0.0014 J	0.04	0.05	< 0.000023	0.0016	0.002	0.0089	0.0154	0.0041 J	4.6
MW-01-O	10/20/2021	Primary	< 0.000057	0.04	0.05	0.0052	0.06	< 0.000041	0.0016	0.002	0.043	0.08	--	0.0027	0.04	0.05	< 0.000023	0.0016	0.002	0.012	0.033	< 0.0023	4.0
Arizona Aquifer Water Quality Standard ⁽³⁾			0.05			--		0.002			0.1			0.05			0.05			0.002		--	

Notes:

(1) Total (i.e., non-speciated) dissolved chromium

(2) Increased frequency monitoring conducted on
11/9/2021 and 12/13/2021.

(3) Arizona Aquifer Water Quality Standard (AWQS),
Drinking Water Standard, Dec 31, 2016.

Detects are **bolded**.

Alert Level Exceedance

Non-detects are reported to the laboratory method detection limit (< MDL).

AL = Alert level

AQL = Aquifer Quality Limit

J = estimated value

mg/L = milligrams per liter

UIC = Underground Injection Control Permit

No. R9UIC-AZ3-FY11-1

APPENDIX A

Data Quality Assurance/Quality Control Summary Memorandum



HALEY & ALDRICH, INC.
One Arizona Center
400 E. Van Buren St., Suite 545
Phoenix, AZ 85004
602.760.2450

MEMORANDUM

28 January 2022
File No. 133887-012

TO: Haley & Aldrich, Inc.
Laura Menken, R.G.

FROM: Haley & Aldrich, Inc.
Alexis Rainery, Engineer
Katherine Miller, Project Manager

SUBJECT: Appendix A – Data Quality Assurance/Quality Control Summary

Analytical results for environmental samples collected during the fourth quarter 2021 compliance monitoring event were verified in accordance with guidance provided by the U.S. Environmental Protection Agency (USEPA).¹ For each laboratory data package, the following quality control/quality assurance criteria from the analysis of the project samples were reviewed:

- Completeness with the chain of custody (COC);
- Comparison of reporting limits to alert levels (AL) and aquifer quality limits (AQL);
- Holding times/preservation;
- Blank sample analysis;
- Laboratory control samples;
- Matrix spike samples;
- Laboratory and field duplicate sample analysis; and
- Verification of laboratory report data.

Sample data were qualified by the laboratory in accordance with laboratory standard operating procedures (SOP). Based on a check of the data qualifiers assigned to the project sample results, these flags were applied to the reported results in accordance with the laboratory-specific SOP.

¹ USEPA, 2012. USEPA Region 9 Guidance for Quality Assurance Program Plans, R9QA/03.2. March.

COMPLETENESS WITH CHAIN OF CUSTODY

Samples were collected, preserved, and shipped following standard COC protocol. Samples were also received appropriately, identified correctly, and analyzed according to the COC. COCs were appropriately signed and dated by the field and/or laboratory personnel. The following exceptions were noted:

- For lab reports 21J0622, 21J0681, and 21J0651, diesel range organics by method USEPA 8015D were cancelled due to a shipping issue that caused an exceeded hold time. The following samples are included in the identified laboratory reports: M55-UBF, M56-LBF, M54-O, M58-O, M22-O, and M52-UBF. The wells were resampled and reanalyzed to resolve the data gap.
- Laboratory report 21J0452 was revised on 13 November 2021 to report only the diluted result for sulfate on sample MW-101-102021.

REPORTING LIMITS

The reporting limits and/or method detection limits were at or below the applicable ALs and AQLs.

HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified as per each method's protocol with the following exceptions:

- All samples analyzed for pH by method SM 4500-H+B were analyzed outside the hold time by the laboratory per client request.

Laboratory Report	Method	Matrix	Holding Time	Preservation	Sample ID, Violation, Qualification
21J0651	USEPA 300.0	Water	28 days	Cool to $\leq 6^{\circ}\text{C}$	Sulfate and chloride by method USEPA 300.0 was reanalyzed outside the 28-day hold time for the following sample: M58-O-102621
21J0681	USEPA 8260B	Water	7 days unpreserved/ 14 days preserved	pH < 2 ; HCl Cool to $\leq 6^{\circ}\text{C}$	Volatile organic compounds (VOC) by method USEPA 8260B were analyzed outside the 14-day holding time for the following sample: Trip Blank
21J0588	All methods	Water	Various	Cool to $\leq 6^{\circ}\text{C}$	The cooler containing the following sample was received warm at 7.1 degrees Celsius ($^{\circ}\text{C}$): M61-LBF-102121 M54-LBF-102121

Laboratory Report	Method	Matrix	Holding Time	Preservation	Sample ID, Violation, Qualification
21J0681	All methods	Water	Various	Cool to ≤ 6 °C	The cooler containing the following sample was received warm at 6.2 degrees Celsius (°C): M52-UBF-102721
21K0184	All methods	Water	Various	Cool to ≤ 6 °C	The cooler containing the following sample was received warm at 6.4 degrees Celsius (°C): M15-GU-110321
21K0185	All methods	Water	Various	Cool to ≤ 6 °C	The cooler containing the following sample was received warm at 6.4 degrees Celsius (°C): M23-UBF-110321
21K0294	All methods	Water	Various	Cool to ≤ 6 °C	The cooler containing the following sample was received warm at 6.1 degrees Celsius (°C): M14-GL-110821
21K0427	All methods	Water	Various	Cool to ≤ 6 °C	The cooler containing the following sample was received warm at 7.2 degrees Celsius (°C): M52-UBF-111121
21K0637	All methods	Water	Various	Cool to ≤ 6 °C	The cooler containing the following sample was received warm at 6.6 degrees Celsius (°C): MW-01-O-122221

BLANK SAMPLE ANALYSIS

Method blank samples had no detections, indicating that no contamination from laboratory activities occurred with the following exceptions:

Laboratory Report	Associated Sample ID(s)	Batch ID	Analyte Detected in Method Blank	Concentration (mg/L, unless noted)
21J0484	M59-O-101921 M60-O-101921	2110251	Antimony	0.000075 J
21J0484		2110252	Uranium	0.000025 J
21J0542	MW-01-O-102021 MW-01-LBF-102021 MW-101-102021	2110251	Antimony	0.000075 J
21J0542		2110252	Uranium	0.000025 J
21J0588	M61-LBF-102121 M54-LBF-102121	2110266	Uranium	0.000025 J
21J0651	M56-LBF-102621 M58-O-102621 M54-LBF-102121	2110306	Barium	0.00010 J
21J0651		2110306	Lead	0.000083 J
21J0651		2110306	Nickel	0.000034 J
21J0681	M52-UBF-102721	2110306	Barium	0.00010 J
21J0681		2110306	Lead	0.000083 J
21J0681		2110306	Nickel	0.000034 J
21J0681		2111074	Naphthalene	1.8 J µg/L
21J0681		2111074	Toluene	0.10 J µg/L
21K0184	M15-GU-110321	2111070	Nickel	0.000027 J
21K0184		2111070	Selenium	0.00035 J
21K0184		2111070	Zinc	0.0027 J
21K0184		2111159	Naphthalene	1.8 J µg/L
21K0184		2111159	Toluene	0.10 J µg/L
21K0184		2111055	Nitrogen, Nitrate (As N)	0.20 J mg/L
21K0294	M14-GL-110821	2111107	Antimony	0.000057 J
21K0294		2111107	Chromium	0.000028 J
21K0294		2111107	Nickel	0.000016 J
21K0294		2111242	Naphthalene	1.1 J µg/L
21K0338	M57R-O-110921	2111107	Antimony	0.000057 J
21K0338		2111107	Chromium	0.000028 J
21K0338		2111107	Nickel	0.000016 J
21L0671	M23-UBF-122821	2112352	Antimony	0.000084 J
21L0671		2112352	Beryllium	0.000019 J
21L0671		2201066	Mercury	0.000050 J

Trip blank samples had no detections, indicating that no contamination occurred during shipping with the following exceptions:

Laboratory Report	Associated Sample ID(s)	Analyte Detected in Method Blank	Concentration (mg/L)
21J0681	M52-UBF-102721	Naphthalene	1.2 J µg/L

SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as system monitoring compounds, are compounds added to each sample prior to preparing samples for determining the efficiency of the extraction procedure by evaluating the percent recovery (%R) of the compounds. The %R for each surrogate compound added to each project sample was determined to be within the laboratory specified quality control limits.

LABORATORY CONTROL AND MATRIX SPIKE SAMPLES

Compounds associated with the laboratory control sample, matrix spike, and matrix spike duplicate analyses exhibited recoveries and relative percent differences (RPD) within the specified limits with the following exceptions:

Laboratory Report	Sample ID	Sample Type	Method	Batch ID	Analyte	%R, RPD	Acceptable %R, RPD
21K0294	M14-GL-110821	MS	USEPA 200.7	211085	Sodium	63%	70-130%
21L0971	M23-UBF-122821	MS	USPEA 200.7	2112352	Calcium	48%	70-130%
21L0971		MS	USPEA 200.7	2112352	Sodium	180%	70-130%

Notes:

% = percent
%R = percent recovery
MS = matrix spike
MSD = matrix spike duplicate
RPD = relative percent difference
USEPA = U.S. Environmental Protection Agency

LABORATORY AND FIELD DUPLICATE SAMPLES

The RPDs for laboratory duplicate analysis were all below 20 percent for water (or the absolute difference rule was satisfied if detects were less than 5 times the reporting limit).

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The following samples were collected for field duplicate analysis and the RPDs were

all below 35 percent for water (or the absolute difference rule was satisfied if detects were less than 5 times the reporting limit) with the following exceptions:

Primary Sample ID	Duplicate Sample ID	Methods for Which Field Duplicates Were Analyzed
MW-01-LBF-102021	MW-101-102021	Anions by USEPA 300.0 Metals by USEPA 200.7 & 200.8 Total dissolved solids by SM 2540C Mercury by E 245.1 Alkalinity by 2320B Specific Conductance by SM2510B Silica by SM4500 VOCs by SW8260B Diesel Range Organics by 8015D
M55-UBF-102521	M102-102521	Anions by USEPA 300.0 Total Dissolved Solids by SM 2540C Metals by USEPA 200.7 and USEPA 200.8
M23-UBF-110321	M281-UBF-110321	
Notes: SM = Standard Method USEPA = U.S. Environmental Protection Agency		

Analyte (mg/L, unless noted)	Primary Sample ID	Duplicate Sample ID	RPD	Qualification
	MW-01-LBF-102021	MW-101-102021		
Copper	0.00092	0.0022	NA	Absolute Difference > RL
Manganese	0.0012	0.0015	NA	Absolute Difference > RL
Analyte (mg/L)	Primary Sample ID	Duplicate Sample ID	RPD	Qualification
	M55-UBF-102521	M102-102521		
Copper	0.0015	0.00076	NA	Absolute Difference > RL
Manganese	0.0013	0.00099	NA	Absolute Difference > RL

For radiological isotopes, the normalized absolute difference for each sample pair was less than 1.96. Any exceptions are noted below.

Analyte (pCi/L)	Primary Sample ID	Duplicate Sample ID	Normalized Abs. Diff.	Qualification
	MW-01-LBF- 102021	MW-101-102021		
Gross Alpha Analytes	7.6 ± 0.8	11.3 ± 1.1	2.72	Norm. Abs. Diff > 1.96

VERIFICATION OF LABORATORY REPORT DATA

A minimum of 10 percent of the data reported by the laboratory were verified against the electronic data deliverables.

\haleyaldrich.com\share\phx_common\Projects\Florence Copper\133887 Quarterly Monitoring\Deliverables\4Q 2021 Reports\UIC Report\Attachments\UIC 6C - Quarterly Compliance Monitoring Report\Appendix A UIC QA_QC Summary Q4_2021_D4.docx

ATTACHMENT 7

Results of Monthly Lixiviant Organic Analysis

TABLE 1**MONTHLY LIXIVIANT (RAFFINATE) MONITORING RESULTS**

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Analyte	Units	Sample Date		
		10/13/2021	11/22/2021	12/13/2021
Benzene	mg/L	<0.0005	<0.0005	<0.0005
Ethylbenzene	mg/L	<0.0005	<0.0005	<0.0005
Naphthalene	mg/L	<0.002	<0.002	<0.002
n-Octane	mg/L	<0.0005	<0.0005	<0.0005
Toluene	mg/L	0.54	<0.0005	<0.0005
Xylenes, Total	mg/L	<0.0015	<0.0015	<0.0015
TPH-Diesel	mg/L	<0.10	<0.10	<0.10
Total Organics	mg/L	0.54	<0.1	<0.1
Maximum Allowable Average Total Organics	mg/L	10	10	10

Notes:

mg/L = milligrams per liter

TPH = total petroleum hydrocarbons

ATTACHMENT 8

Results of Mechanical Integrity Testing

TABLE 1**Q4 2021 MECHANICAL INTEGRITY TESTS**

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Q4 2021 Mechanical Integrity Tests			
Well ID	Temperature Log Date	Pressure Test Date	Pass (P) Fail (F)
WB-01	11/9/2021	--	P
WB-02	11/9/2021	--	P
WB-03	11/9/2021	--	P
WB-04	11/9/2021	--	P
I-01	--	12/13/2021	P
I-02	--	11/29 - 11/30/2021	P
I-03	--	12/6/2021	P
I-04	--	12/17/2021	P

Notes:

Mechanical Integrity Test reports for Westbay wells and injection wells sent to U.S. Environmental Protection Agency under separate cover.

ATTACHMENT 9

Results of Annular Conductivity Device Monitoring



ANNULAR CONDUCTIVITY DATA QA PROCEDURE & DOCUMENTATION FORM (V.1)

GENERAL

HGI Project Name: 2018-030 - FCP Bulk & Annular Conductivity Monitoring	Project Site: Florence Copper Project	Weather Conditions: 86 Cloudy
Date 10-06-2021	Field Operator Name: C. BALDYLA	Start and End Time: 1752 - 2321

EQUIPMENT

AGI MiniSting (MS) Serial #: S0608049	HGI Cray Interface Panel SN# CR-ES-002	DIAGNOSTICS		MEASUREMENT SETTINGS	
		(See back of sheet for detailed instructions and procedures)			
6Ω Resistor Standard	Result: 6.375	Pass Criteria: $6.25\Omega \pm 0.30$	Circle One: Pass or Fail	<ul style="list-style-type: none"> • No. Cycles: 4 • Max Error: Off • Max Current: 50mA - 20mA • Measure Time: 3.6 • Measure mode: RESISTANCE 	

DATA COLLECTION:

WELL ID	Time (24h)	Current (1 mA)	1			2			3			Data Acceptance Pass = P, Fail = F
			Reading	Resistance ($\Delta V = \Omega$)	Error ($\sigma = \%$)	Reading	Resistance ($\Delta V = \Omega$)	Error ($\sigma = \%$)	Reading	Resistance ($\Delta V = \Omega$)	Error ($\sigma = \%$)	
WB-04	1800	20	272	60.97	1.4	273	60.45	2.5	274	60.25	2.8	P
WB-03	1806	20	275	77.61	0.7	276	75.77	1.2	277	75.11	1.4	P
WB-02	1809	20	278	79.84	2.3	279	80.45	2.5	280	80.49	2.6	P
WB-01	1814	20	281	52.76	1.4	282	50.94	0.8	283	50.06	0.9	P
B-01	1816	20	284	72.72	0.5	285	71.83	0.8	286	71.57	0.9	P
B-07	1821	20	287	61.37	0.4	288	60.68	0.8	289	60.48	0.9	P
B-06	1825	20	290	57.76	1.2	291	55.76	1.0	292	55.04	1.2	P
B-05	1829	20	293	89.85	0.3	294	88.98	0.5	295	86.43	0.7	P
B-04	1911	20	297	52.77	0.9	298	51.42	0.7	299	50.84	0.9	P
B-03	1919	20	300	58.63	1.3	301	56.87	0.4	302	56.12	0.5	P
B-02	2320	20	303	63.19	1.7	304	63.45	1.9	305	63.34	1.7	P

Well ID's that begin with a "B" correspond to the wells that begin with an "O" in standard reporting. For example, B-01 corresponds to O-01.

DATA QUALITY ACCEPTANCE	FIELD OBSERVATIONS
Measurement Error Evaluation Pass Criteria: 66% (2/3) of measurement error values less than 5%	<i>(Briefly describe site activities at time of data acquisition, status of electrode arrays, or other parameters that may influence readings.)</i>
	DELETE 296 + 297 BATTERY DIED 2X
<i>(Signature space for field operator to sign and date all requested tests and signatures for quality control purposes. Includes all required signatures from all personnel involved in the procedure, including field operator, supervisor, and data inspector.)</i>	<i>(Signature space for data inspector to sign and date all requested tests and signatures for quality control purposes. Includes all required signatures from all personnel involved in the procedure, including field operator, supervisor, and data inspector.)</i>
Ch. Bl 10/6/2021 Field Operator Signature/Date	Ch. Bl 10/6/2021 Data Inspector Signature/Date

ATTACHMENT 10

Summary of Plugging and Abandonment
(Placeholder – Not Applicable for this Monitoring Period)

ATTACHMENT 11

Table of Monthly Casing Annulus and Injection Pressures

Q4 2021 DAILY WELLHEAD PRESSURES - INJECTION WELLS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Page 1 of 3

Table 1. October 2021 Wellhead Pressures

Date	I-01			I-02			I-03			I-04			Fracture Gradient
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	
10/1/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/2/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/3/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/4/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/5/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.00	0.03	112.89
10/6/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/7/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.03	0.03	112.89
10/8/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/9/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/10/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/11/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.03	0.03	112.89
10/12/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/13/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/14/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.00	0.03	112.89
10/15/2021	0.00	0.00	0.00	NM	NM	NM	0.03	0.00	0.04	0.03	0.01	0.03	112.89
10/16/2021	0.00	0.00	0.00	NM	NM	NM	0.03	0.03	0.03	0.03	0.03	0.03	112.89
10/17/2021	0.00	0.00	0.00	NM	NM	NM	0.02	0.00	0.03	0.03	0.01	0.03	112.89
10/18/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.03	0.03	112.89
10/19/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/20/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/21/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
10/22/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.01	0.03	0.01	0.03	112.89
10/23/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/24/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/25/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/26/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/27/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.01	0.03	0.01	0.03	112.89
10/28/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.01	0.03	0.01	0.03	112.89
10/29/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.01	0.03	0.01	0.03	112.89
10/30/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.01	0.03	0.01	0.03	112.89
10/31/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.00	0.00	0.00	112.89

Notes:

All measurements is pounds per square inch (psi)

NM = Not measured or otherwise not available

I-02 operated as Recovery Well 10/1 - 10/10/2021, then was inactive through 10/31/2021

Calculation of Pressure Allowed at the Wellhead from the Allowed Fracture Gradient

P-Wellhead = P-TOS - P-Col = (P-Frac x D-TOS) - [D-TOS / Conv] Where:

P-Fracture	= Pressure allowed at the top of the injection well screen (TOS)	=	0.65	psi/foot of depth
D-TOS	= Depth to top of injection well screens	=	520	feet
P-TOS	= Total pressure allowed at top of screen = P-Fracture x D-TOS	= 0.65 psi/foot x 520 feet	338	psi
Conv	= Feet of Water per psi	=	2.31	feet/psi
P-Col	= Pressure from weight of water column at TOS	= 520 feet / 2.31 feet/psi	225.11	psi
P-Wellhead	= Allowable pressure at the top of the wellhead = P-TOS - P-Col	= 338 psi - 255.1 psi	112.89	psi

Q4 2021 DAILY WELLHEAD PRESSURES - INJECTION WELLS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Page 2 of 3

Table 2. November 2021 Wellhead Pressures

Date	I-01			I-02			I-03			I-04			Fracture Gradient
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	
11/1/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/2/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.03	0.03	0.01	0.03	112.89
11/3/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/4/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/5/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/6/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/7/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/8/2021	0.00	0.00	0.00	NM	NM	NM	0.01	0.00	1.34	0.03	0.01	0.03	112.89
11/9/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/10/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/11/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/12/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/13/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.00	0.03	112.89
11/14/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/15/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/16/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/17/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.00	0.03	112.89
11/18/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.03	0.03	112.89
11/19/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/20/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.03	0.03	112.89
11/21/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.03	0.03	112.89
11/22/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.03	0.03	112.89
11/23/2021	0.00	0.00	0.00	NM	NM	NM	0.02	0.00	2.59	0.03	0.03	0.03	112.89
11/24/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/25/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.03	0.03	112.89
11/26/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/27/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/28/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/29/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89
11/30/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	112.89

Notes:

All measurements is pounds per square inch (psi)

NM = Not measured or otherwise not available

I-02 was not in operation 11/1/2021 - 11/30/2021

Calculation of Pressure Allowed at the Wellhead from the Allowed Fracture Gradient

$$P\text{-Wellhead} = P\text{-TOS} - P\text{-Col} = [P\text{-Frac} \times D\text{-TOS}] - [D\text{-TOS} / Conv] \text{ Where:}$$

P-Fracture	= Pressure allowed at the top of the injection well screen (TOS)	=	0.65	psi/foot of depth
D-TOS	= Depth to top of injection well screens	=	520	feet
P-TOS	= Total pressure allowed at top of screen = P-Fracture x D-TOS	=	338	psi
Conv	= Feet of Water per psi	=	2.31	feet/psi
P-Col	= Pressure from weight of water column at TOS	=	225.11	psi
P-Wellhead	= Allowable pressure at the top of the wellhead = P-TOS - P-Col	=	112.89	psi

Q4 2021 DAILY WELLHEAD PRESSURES - INJECTION WELLS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Page 3 of 3

Table 3. December 2021 Wellhead Pressures

Date	I-01			I-02			I-03			I-04			R-09				Fracture Gradient
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max		
12/1/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	NM	NM	NM	112.89	
12/2/2021	0.06	0.00	0.08	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	NM	NM	NM	112.89	
12/3/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.00	0.00	0.00	NM	NM	NM	112.89	
12/4/2021	0.00	0.00	0.00	NM	NM	NM	0.00	0.00	0.00	0.00	0.00	0.00	NM	NM	NM	112.89	
12/5/2021	0.00	0.00	0.00	NM	NM	NM	0.01	0.00	0.03	0.00	0.00	0.00	NM	NM	NM	112.89	
12/6/2021	0.06	0.00	0.09	NM	NM	NM	0.01	0.00	0.03	0.03	0.01	0.03	NM	NM	NM	112.89	
12/7/2021	0.07	0.03	0.06	NM	NM	NM	0.00	0.00	0.00	0.03	0.01	0.03	NM	NM	NM	112.89	
12/8/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	6.16	0.09	18.94	112.89	
12/9/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	12.23	3.46	21.57	112.89	
12/10/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	19.19	9.33	30.85	112.89	
12/11/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	12.66	5.07	24.93	112.89	
12/12/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	14.60	12.18	21.22	112.89	
12/13/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	15.28	13.84	16.11	112.89	
12/14/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	20.76	14.83	30.14	112.89	
12/15/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	26.22	14.99	37.78	112.89	
12/16/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	20.21	0.00	28.39	112.89	
12/17/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	23.40	18.98	31.00	112.89	
12/18/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	19.67	17.83	22.38	112.89	
12/19/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	19.02	11.77	20.61	112.89	
12/20/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	16.16	2.67	26.01	112.89	
12/21/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.41	2.48	14.05	112.89	
12/22/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	12.38	10.88	13.70	112.89	
12/23/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	10.67	10.14	12.04	112.89	
12/24/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.16	10.14	12.50	112.89	
12/25/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	13.65	10.16	16.65	112.89	
12/26/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	13.93	9.21	19.09	112.89	
12/27/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	14.08	7.91	22.20	112.89	
12/28/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	27.98	21.64	34.14	112.89	
12/29/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	33.58	30.64	34.48	112.89	
12/30/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	29.93	22.75	32.25	112.89	
12/31/2021	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	21.34	6.72	24.1	112.89	

Notes:

All measurements is pounds per square inch (psi)

NM = Not measured or otherwise not available

I-02 was not in operation 12/1/2021 - 12/8/2021

I-02 and I-03 converted to recovery wells on 12/8/2021

I-01 and I-04 are converted to recovery wells on 12/8/2021 but are not operated until 12/20/2021

Recovery well R-09 converted to injection well on 12/8/2021.

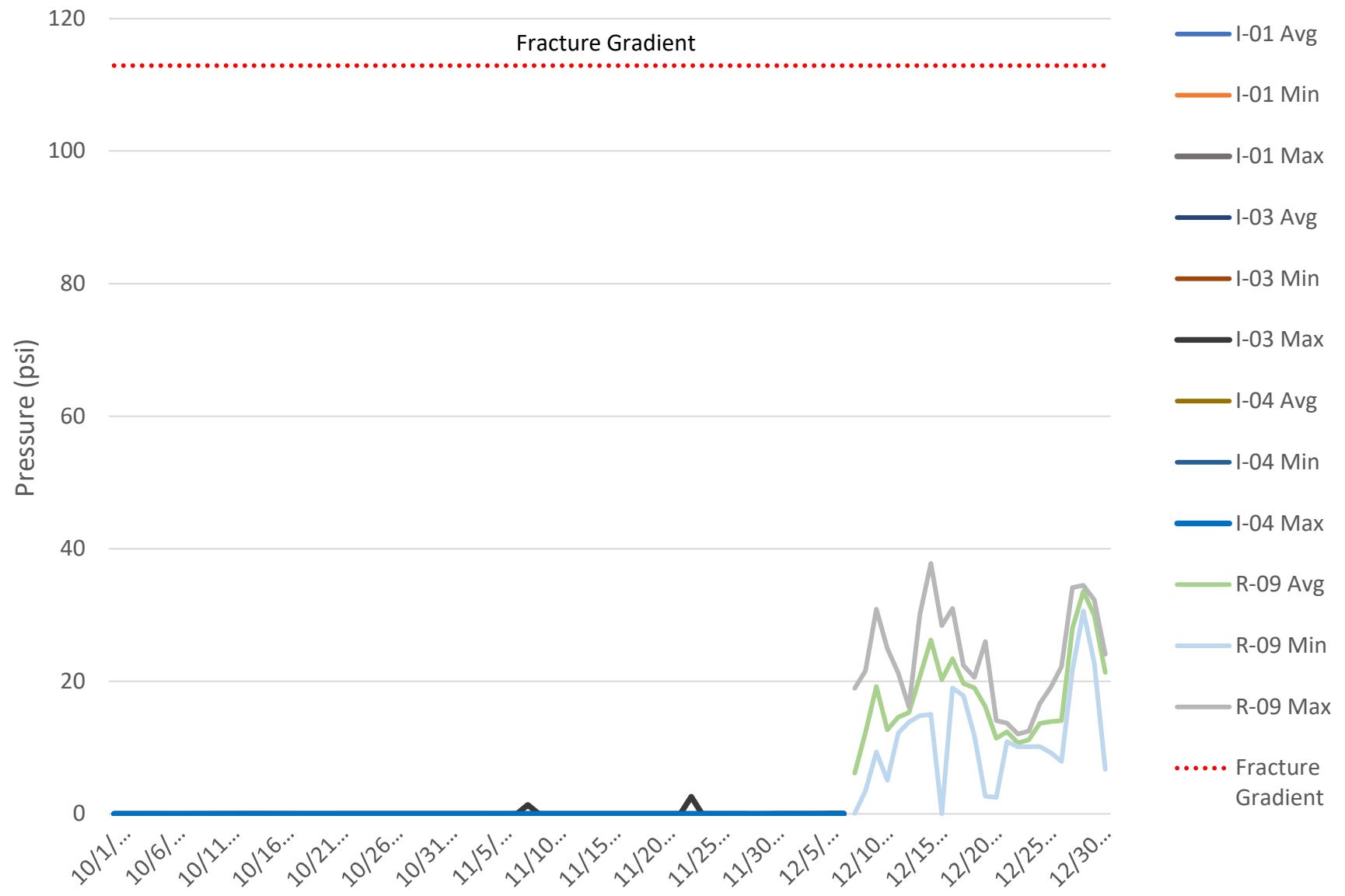
I-01 and I-04 begin operation as recovery wells on 12/20/2021

Calculation of Pressure Allowed at the Wellhead from the Allowed Fracture Gradient

$$P\text{-Wellhead} = P\text{-TOS} - P\text{-Col} = [P\text{-Frac} \times D\text{-TOS}] - [D\text{-TOS} / Conv]$$

Where:
 $P\text{-Frac}$ = Pressure allowed at the top of the injection well screen (TOS) = 0.65 psi/foot of depth
 $D\text{-TOS}$ = Depth to top of injection well screens = 520 feet
 $Conv$ = Feet of Water per psi = 2.31 feet/psi
 $P\text{-Col}$ = Pressure from weight of water column at TOS = 520 feet / 2.31 feet/psi = 225.11 psi
 $P\text{-Wellhead}$ = Allowable pressure at the top of the wellhead = P-TOS - P-Col = 338 psi - 225.11 psi = 112.89 psi

Figure 1. Daily Wellhead Pressures - Injection Wells



Q4 2021 - DAILY CASING ANNULUS PRESSURES - INJECTION WELLS

FLORENCE COPEPR INC.

FLORENCE, ARIZONA

Page 1 of 3

Table 4. October 2021 Casing Annulus Pressure

Date	I-01			I-02			I-03			I-04			Fracture Gradient
	Avg	Min	Max										
10/1/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/2/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/3/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/4/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/5/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/6/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/7/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/8/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/9/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/10/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/11/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/12/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/13/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/14/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/15/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/16/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/17/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/18/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/19/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/20/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/21/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/22/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/23/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/24/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/25/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/26/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/27/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/28/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/29/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/30/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
10/31/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89

Notes:

All measurements in pounds per square inch (psi)

Q4 2021 - DAILY CASING ANNULUS PRESSURES - INJECTION WELLS

FLORENCE COPEPR INC.

FLORENCE, ARIZONA

Page 2 of 3

Table 5. November 2021 Casing Annulus Pressure

Date	I-01			I-02			I-03			I-04			Fracture Gradient
	Avg	Min	Max										
11/1/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/2/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/3/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/4/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/5/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/6/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/7/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/8/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/9/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/10/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/11/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/12/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/13/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/14/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/15/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/16/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/17/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/18/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/19/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/20/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/21/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/22/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/23/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/24/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/25/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/26/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/27/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/28/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/29/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
11/30/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89

Notes:

All measurements in pounds per square inch (psi)

Q4 2021 - DAILY CASING ANNULUS PRESSURES - INJECTION WELLS

FLORENCE COPEPR INC.

FLORENCE, ARIZONA

Page 3 of 3

Table 6. December 2021 Casing Annulus Pressure

Date	I-01			I-02			I-03			I-04			R-09			Fracture Gradient
	Avg	Min	Max													
12/1/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NM	NM	NM	112.89
12/2/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NM	NM	NM	112.89
12/3/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NM	NM	NM	112.89
12/4/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NM	NM	NM	112.89
12/5/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NM	NM	NM	112.89
12/6/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NM	NM	NM	112.89
12/7/2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NM	NM	NM	112.89
12/8/2021	NM	0.00	0.00	0.00	112.89											
12/9/2021	NM	0.00	0.00	0.00	112.89											
12/10/2021	NM	0.00	0.00	0.00	112.89											
12/11/2021	NM	0.00	0.00	0.00	112.89											
12/12/2021	NM	0.00	0.00	0.00	112.89											
12/13/2021	NM	0.00	0.00	0.00	112.89											
12/14/2021	NM	0.00	0.00	0.00	112.89											
12/15/2021	NM	0.00	0.00	0.00	112.89											
12/16/2021	NM	0.00	0.00	0.00	112.89											
12/17/2021	NM	0.00	0.00	0.00	112.89											
12/18/2021	NM	0.00	0.00	0.00	112.89											
12/19/2021	NM	0.00	0.00	0.00	112.89											
12/20/2021	NM	0.00	0.00	0.00	112.89											
12/21/2021	NM	0.00	0.00	0.00	112.89											
12/22/2021	NM	0.00	0.00	0.00	112.89											
12/23/2021	NM	0.00	0.00	0.00	112.89											
12/24/2021	NM	0.00	0.00	0.00	112.89											
12/25/2021	NM	0.00	0.00	0.00	112.89											
12/26/2021	NM	0.00	0.00	0.00	112.89											
12/27/2021	NM	0.00	0.00	0.00	112.89											
12/28/2021	NM	0.00	0.00	0.00	112.89											
12/29/2021	NM	0.00	0.00	0.00	112.89											
12/30/2021	NM	0.00	0.00	0.00	112.89											
12/31/2021	NM	0.00	0.00	0.00	112.89											

Notes:

All measurements in pounds per square inch (psi)

NM = Not measured or otherwise not available

I-02 was not in operation 12/1/2021 - 12/8/2021

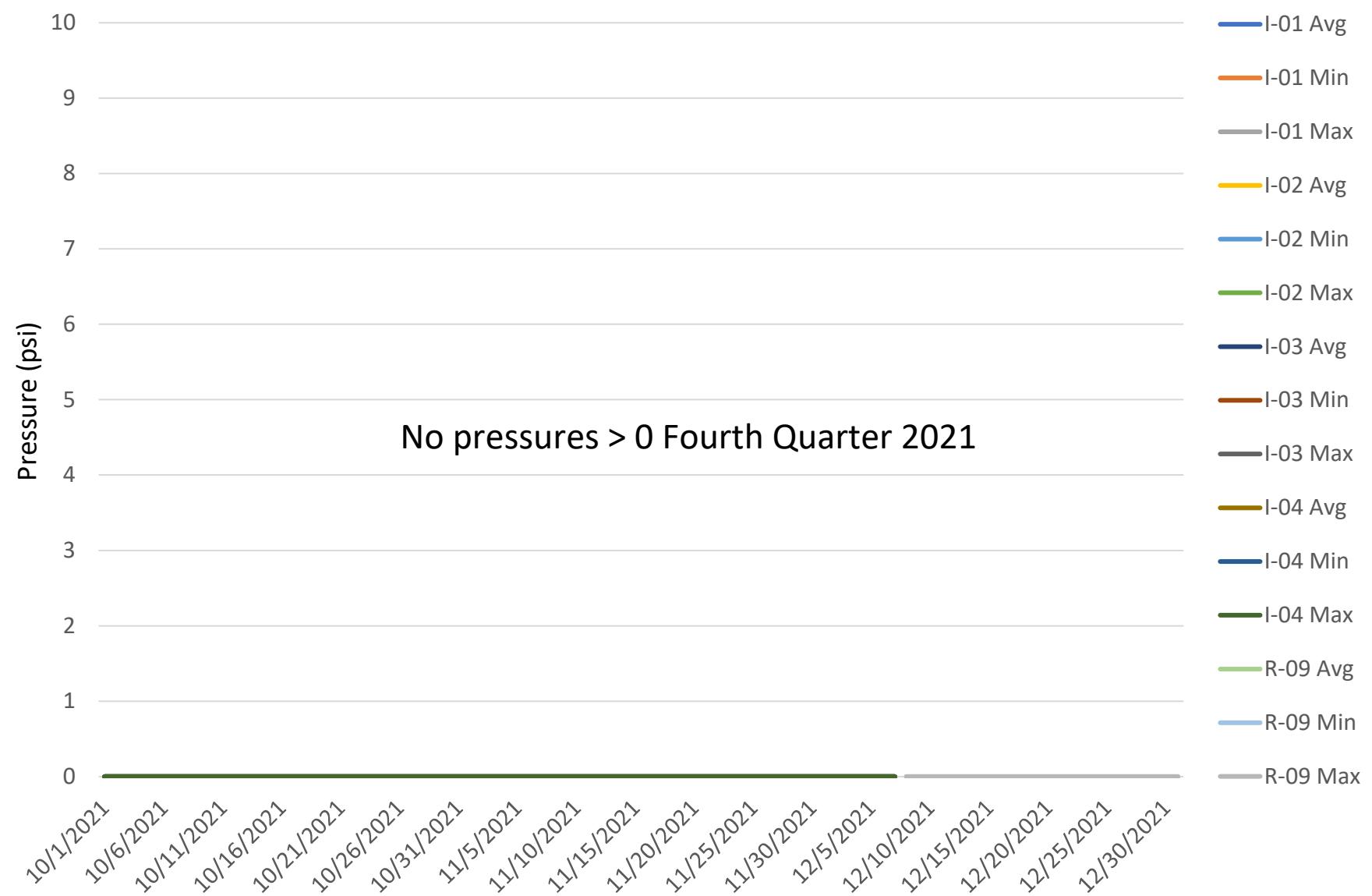
I-02 and I-03 converted to recovery wells on 12/8/2021

I-01 and I-04 are converted to recovery wells on 12/8/2021 but are not operated until 12/20/2021

Recovery well R-09 converted to injection well on 12/8/2021.

I-01 and I-04 begin operation as recovery wells on 12/20/2021

Figure 2. Daily Casing Annulus Pressures - Injection Wells



ATTACHMENT 12

Results for Monthly Treated Water Samples

Q4 2021

MONTHLY ISCR WELLFIELD WATER ANALYTICAL RESULTS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 1. Treated ISCR Wellfield Water

Monitoring Parameters	Maximum Ambient Water Quality ⁽¹⁾	Analytical Results		
		10/21/2021	11/17/2021	12/13/2021
Metals				
Aluminum	0.08	< 2.0	< 2.0	< 2.0
Antimony	0.0005	< 0.20	< 0.20	< 0.2
Arsenic	0.0029	< 0.040	< 0.040	< 0.040
Barium	0.11	< 0.050	< 0.050	< 0.050
Beryllium	0.0005	< 0.0020	< 0.0020	< 0.0020
Cadmium	0.0014	< 0.0020	< 0.0020	< 0.0020
Chromium	0.01	< 0.030	< 0.030	< 0.030
Cobalt	0.0081	< 0.10	< 0.10	< 0.10
Copper	1.9	0.1	0.081	0.62
Iron	0.3	< 0.30	< 0.30	< 0.30
Lead	0.001	< 0.040	< 0.040	< 0.040
Magnesium	30	< 3.0	< 3.0	< 3.0
Manganese	0.12	< 0.020	< 0.020	< 0.020
Mercury	0.001	< 0.0010	< 0.0010	< 0.0010
Molybdenum	--	< 0.010	< 0.010	< 0.010
Nickel	0.015	< 0.050	< 0.050	< 0.050
Selenium	0.0039	< 0.040	< 0.040	< 0.040
Thallium	0.001	< 0.050	< 0.050	< 0.050
Uranium	--	0.01	0.01	0.00081
Zinc	1.9	< 0.040	< 0.040	< 0.040
Inorganic Parameters				
Total Alkalinity	220	NA ⁽²⁾	NA ⁽²⁾	NA ⁽²⁾
Bicarbonate	220	NA ⁽²⁾	NA ⁽²⁾	NA ⁽²⁾
Carbonate	20	NA ⁽²⁾	NA ⁽²⁾	NA ⁽²⁾
Hydroxide	2	NA ⁽²⁾	NA ⁽²⁾	NA ⁽²⁾
pH (pH Units)	8.7	2.67	2.55	2.57
Temperature (°C)	32.4	22.4	24.3	25.7
Conductivity	1800	1148	1186	1157
Calcium	140	< 4.0	< 4.0	< 4.0
Chloride	340	73	87	79
Fluoride	0.89	0.8	< 0.50	< 0.50
Potassium	11	< 5.0	< 5.0	< 5.0
Sodium	180	< 5.0	< 5.0	< 5.0
TDS	1100	110	< 20	28
Nitrate (as N)	9.7	4.1	3.6	3.8
Nitrite (as N)	0.1	< 0.10	< 0.10	< 0.10
Sulfate	230	38	37	37
Organic Parameters				
Benzene	0.063	< 0.00050	< 0.00050	< 0.00050
Carbon Disulfide	--	NA ⁽³⁾	NA ⁽³⁾	NA ⁽³⁾
Ethylbenzene	0.054	< 0.00050	< 0.00050	< 0.00050
Naphthalene	--	< 0.002	< 0.002	< 0.002
n-octane	--	< 0.00050	< 0.00050	< 0.00050
Toluene	0.057	< 0.00050	< 0.00050	< 0.00050
Total Xylene	0.13	< 0.0015	< 0.0015	< 0.0015
Total Petroleum Hydrocarbons - Diesel	0.17	< 0.0001	< 0.0001	< 0.0001
Radionuclide Parameters				
Gross Alpha (pCi/L)	2.8	1.5 ± 0.6	< 1.0	1 ± 0.2
Uranium Isotopes (total) (pCi/L)	30.2	0.9 ± 0.3	< 0.4	0.8 ± 0.3
Adjusted Gross Alpha (pCi/L)	15.4	0.6 ± 0.7	< 1	0.2 ± 0.4
Gross Beta (pCi/L)	--	2.4	< 2.4	< 2.4
Radium Isotopes 226+228 (pCi/L)	6.2	0.6	< 0.6	< 0.6
Radon (pCi/L)	--	1560.0 ± 159.0	1811.1 ± 182.3	1447.2 ± 146.5

Notes:

(1) Maximum ambient water quality at the site pre-operation.

(2) Alkalinity analysis was not reported due to matrix interference. Sample pH was less than 4.5.

(3) No analysis for carbon disulfide in fourth quarter

All results in milligrams per liter (mg/L) unless otherwise noted.

Non-detects are reported to the laboratory reporting limit

Radionuclide data presented as result ± uncertainty

ISCR = in-situ copper recovery

pCi/L = picocuries per liter

ATTACHMENT 13

Migratory Bird Landings

TABLE 1
Q4 2021 OBSERVED MIGRATORY BIRD LANDINGS
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Date	Migratory Bird Species	Comments:	Fatality (Y or N)
-	-	-	-

Notes:

*Florence Copper personnel conduct daily inspections of the Process Solution Impoundment and BHP Pond.
There were no migratory bird landings during Q4 2021.*